
**2008 MARYLAND ADULT TOBACCO NON-RESPONDERS
FOLLOW-UP SURVEY
METHODOLOGY REPORT**

Submitted to:

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I. INTRODUCTION

This report describes the survey implementation for the Maryland Department of Health and Mental Hygiene (MD DHMH) 2008 Maryland Adult Tobacco Survey Non-Response Follow-Up (MATS NRFU). The purpose of the MATS NRFU is to ascertain the tobacco-use behaviors of those who did not respond to the 2006 Maryland Adult Tobacco Survey (MATS) and to contrast the tobacco-use behaviors of this population to those that did participate. National experience with adult tobacco surveys generally suggests that a higher proportion of current smokers refuse to participate in the survey than do non-smokers. If differences are found to be statistically significant, this data may be used to develop more comprehensive estimates than are currently possible through use of the 2006 MATS data alone.

The 2008 MATS NRFU survey was derived from the 2006 MATS survey, and used a methodology similar to that employed for the 2006 MATS.

The MD DHMH contracted with the Burlington, Vermont office of Macro International Inc. (Macro) to perform the MATS NRFU data collection. The 2008 MATS NRFU was implemented from January 2008 through February of 2008. Data collection was conducted via telephone surveys with both randomly selected adults and pre-selected adults in telephone-equipped Maryland households that had previously not participated in the 2006 MATS.

To facilitate the survey implementation process, Macro conferred regularly with MD DHMH during the course of data collection and throughout the project in general via informal e-mail and telephone communications. A Web portal was also designed to display the following information:

- CATI dispositions for all dialed records
- Completes by demographic category, gender category, race category and smoking status
- CDC dispositions for all dialed records
- CASRO Response Rate
- Cooperation Rate
- Overall Response Rate

The following report details Macro's sampling design, questionnaire design, interviewing activities and data collection protocol, quality assurance activities, and response rates for the 2008 MATS NRFU survey. Also included, as appendices, are the pre-notification letters, the MATS NRFU survey instrument, the quality assurance form used to assess interviewer performance, and response rate formulas used to calculate the rates.

II. SAMPLE DESIGN AND ELIGIBILITY REQUIREMENTS

Sample Population

Sample for the 2008 MATS NRFU survey was drawn from the existing 2006 MATS sample. Records eligible for inclusion in the MATS NRFU were those whose dispositions indicate that a MATS survey interview was not completed, did not contain indicia of ineligibility, and for which at least one contact was made by an interviewer. The eligible dispositions included:

- Respondent refused to participate after selection
- No eligible respondent was identified
- Selected respondent was not available
- Terminated call mid-way through the survey questionnaire
- Hang-up prior to selection of a respondent

The target number of completes to collect was 3,000 interviews. Macro exceeded target completes and obtained 3548 total completes.

Pre-Notification Mailing

A pre-notification mailing was conducted for the 2008 MATS NRFU. It was divided into two categories: households from which a respondent had been selected during the MATS, and households for which no respondent selection was performed during the MATS. MATS NRFU

Macro conducted a reverse-address match on all records selected for the MATS NRFU and sent a letter to both selected and non-selected households; the salutation and introduction were tailored to each group.

If a respondent had been selected during the 2006 MATS, the letter and greeting addressed this respondent (for example, "Dear Oldest Female" or "Dear Second Oldest Male"). Households that had not gone through the 2006 MATS selection process had a standard greeting of "Dear Maryland Resident".

The letter informed the selected respondent or the more general household that they had been selected to participate in the MATS NRFU telephone survey about their use of tobacco products and that they would be receiving a call from Macro to conduct the survey. It also informed respondents that if a selected respondent completed the survey, they would be compensated for their time with a twenty-dollar money order.¹

¹ A formatting error left out the dollar amount of the incentive in the initial letter to non-selected respondents. To ensure that non-selected respondents received this information, a follow-up postcard referencing the amount of the incentive was mailed to the non-selected respondents prior to fielding the non-selected respondent portion of the sample. A copy of each letter can be found in *Appendix F: Pre-Notification Letters & Postcards*.

Sample Design

The table below shows the dispositions and number of records selected for the MATS NRFU.

Disposition	Count	Percent
2: Refused after selection	10048	3.4565
6: No eligible respondent	463	0.1593
7: Selected not available	6174	2.1238
9: Mid-terminate	1347	0.4634
14: Hang-up before selection	56012	19.2680
Total Records:	74044	25.4795

III. QUESTIONNAIRE DESIGN

The 2007 MATS NRFU survey was based on the 2006 MATS survey. The 2007 MATS NRFU questionnaire was comprised of 19 questions and covered basic demographics, smoking status and quit attempts. Additionally, sample comprised of selected respondents from the 2006 MATS were asked if they remembered being contacted in 2006 and, if so, why they had refused to participate.

The average interview length for the MATS NRFU was approximately 5.5 minutes.

The questionnaire that was administered to respondents can be found in *Appendix A: The 2007 MATS NRFU Questionnaire*.

IV. DATA COLLECTION PROTOCOL

Interviewing Protocol

Data collection began January 23rd, 2008 and ended February 10th, 2008. The sample design called for a total of 3,000 completed interviews. In all, 3,548 interviews were collected.

Of the targeted 3,000 completes, Macro aimed to obtain at least 2,000 from selected respondents. This goal was met, and Macro obtained 2,011 completed interviews from selected respondents and 1537 completed interviews from non-selected respondents.

The telephone survey was fielded from Macro's Plattsburg, New York, Computer-Assisted Telephone Interviewing (CATI) Research Center. Fifteen attempts were made until a final disposition was obtained. A final disposition was attained when:

- The respondent completed the interview;
- The telephone number was found to be invalid;
- The record reached 15 attempts distributed among three different day-parts;
- The respondent gave a final refusal; or
- A determination was made that the record should receive some other final disposition, such as a language barrier or impairment.

Experienced, supervised personnel conducted the MATS NRFU interviews using Computers for Marketing Corporation's (CfMC) CATI software package. To maximize response rates, Macro concentrated calls between 5 p.m. and 9 p.m. Monday through Friday, and between 10 a.m. and 9:00 p.m. on Saturday and Sunday, E.S.T. In Macro's experience, this is when most eligible respondents are available to complete interviews.

Protocol was modified during the fielding period when it became clear that there were more sample records than would be needed to reach the target number of completes. Please see Section VII, *Issues with Data Collection*.

Contacting Respondents

The following protocols were followed when contacting households and potential respondents:

Treatment of No Answers. If a call to a sampled telephone number was not answered, the number was repeatedly called at different times, during daytime and evening hours (9 a.m. to 9 p.m. Monday–Friday; 10 a.m. to 9 p.m. Saturday; 10 a.m. to 9 p.m. Sundays), on different days of the week, in a pattern designed to maximize the likelihood of contact with a minimum number of calls. At least 15 contact attempts, over a minimum five-day period, were made to reach a sampled number. Once any contact was made at a residence, as many calls as necessary were made to reach the selected adult (within the permitted time schedule).

Rings Per Attempt. The telephone rang a minimum of five times on each attempt made on a record.

Busy Lines. Busy lines were called back at least twice per shift at 10-minute intervals. If the line was still busy after the third attempt, the number was assigned a "busy" disposition and called during the next shift.

Respondent Selection. A portion of the sample had a respondent that had already been selected during the 2006 MATS. In these cases, the interviewer asked to speak with the selected responded. If a respondent had not

previously been selected, once a household was contacted an adult was selected for participation in the study. No interview was conducted if:

(1) The adult was:

- Unavailable during the survey period;
- Unable or unwilling to participate; or
- Did not speak English well enough to be interviewed.

(2) A randomly sampled number yielded:

- A business;
- An institution;
- Group quarters; or
- Other strictly non-residential space.

(3) The number was an occupant's second residence, and his or her stay was less than 30 days.

Language of Interviewing. Interviewing for the 2007 MATS NRFU was conducted in English. The questionnaire was programmed for Spanish Interviewing; however, data collection and completes were obtained so quickly that Spanish interviews were not conducted.

Converting Initial Refusals. Since many of the households contacted for the 2008 MATS NRFU had refused to participate in the 2006 MATS, a revised refusal protocol was used. Any record that had a refusal disposition in the 2006 MATS study were permitted one refusal disposition in the MATS NRFU survey prior to the record being terminated. All other dispositions received up to two soft refusals before the record was terminated (including those being handled by the conversion unit).

Interviewers were trained to disposition a record as a soft refusal if the respondent:

- Hung up after the name of the client had been read;
- Gave a refusal statement such as "no thanks";
- Stated it was "not a good time" but when prompted for better time, could not provide one.

A record was considered to be a hard refusal if the respondent:

- Was angry and/or raising his or her voice;
- Persistently repeated statements such as "don't call me back, don't call me back";
- Claimed he or she hated surveys or the government; or
- Was not interested in completing the survey (but was not angry or using abusive language) and the interviewer completed all of the following criteria:
 - Verified that a household was reached;
 - Identified and reached the selected respondent;
 - Completed the screener and the confidentiality statement;
 - Attempted an immediate refusal conversion; and
 - Received a definitive refusal statement from the respondent.

Survey Pre-test

Macro conducted a pre-test on January 23rd 2008 through January 24th 2007; this pre-test collected 100 completed interviews. No problems were discovered during the pre-test, and data collection resumed on January 25th, 2008. A dataset of the first 100 completed interviews was delivered to the MD DHMH upon completion of the pretest.

V. QUALITY ASSURANCE PROTOCOL

Macro implements stringent quality assurance protocols to ensure the highest quality data for our clients.

Data Collection Quality Control

Macro programmed the English questionnaire using the CfMC's Survent software package, which is designed specifically for programming and managing CATI studies. CfMC software, used by Macro to program all of its CATI surveys, is a powerful questionnaire programming language that provides:

- Call management;
- Quota controls;
- In-bound calling capabilities;
- Multilingual interviewing capabilities;
- Data back-up;
- Monitoring; and
- Incidence tracking.

Macro's programmers have customized this package by adding a suite of database management and statistical analysis routines to support complex sampling, telephone sample management, and reporting requirements that are not met by the off-the-shelf product. Upon programming completion, Macro project managers rigorously tested the survey. Testing included:

- Developing scenarios to test all possible paths through the questionnaire;
- Checking frequencies of randomly generated data; and
- Verifying frequencies of the data after the first day of interviewing.

To track quality control indicators, Macro generated reports that read the survey data file, generating summary statistics on the following:

- Interviewer efficiencies (completes/hour, both on an individual and project level);
- Lower-bound and upper-bound response rates;
- Demographics on completed interviews; and
- All call dispositions (both interim and final).

These reports were generated and immediately distributed to the project management team for daily review. This enabled the management team to quickly detect and resolve any problems. Checks were performed on open-ended responses to determine the accuracy of data entry by interviewers. Inconsistencies or problems were documented in internal progress reports.

Interviewer Monitoring

Macro supervisors and quality assurance (QA) assistants monitor interviewer performance through formal and informal performance evaluations.

Monitoring was primarily conducted by Macro's special quality control staff, called QA assistants. QA assistants monitored at least 10 percent of the interviews by tapping into interviewers' telephone lines and using the CATI system's monitoring module to follow the course of the interview on a computer screen. Interviewers were scored on several measures of interview performance designed to reinforce proper interviewer protocol:

- Verbatim response entry;
- Dispositioning calls, leaving messages, and scheduling callbacks;
- Reading scales properly;
- Knowing the mechanics of CfMC and the Santa Clara Steps survey instrument;
- Reading and probing on open-ended questions;
- Reading multiple response lists;
- Reading the introduction and persuading respondents to complete interviews;
- Pace of reading the survey;
- Clarity and/or tone of voice while interviewing;
- Probing and/or clarifying responses that are not clear;
- Keeping control of the interview;
- Converting refusals on specific questions;
- Overall professionalism;
- Being neutral while interviewing, not leading respondent; and
- Overall dialing habits.

QA staff also assured that interviewers:

- Coded incomplete interviews properly;
- Left useful messages for the next interviewer; and
- Made every attempt to complete an interview on every contact.

VI. INTERVIEWER TRAINING

Interviewers were trained to conduct the 2008 MATS NRFU, prior to data collection. The training, in conjunction with Macro's quality assurance measures (discussed in the previous chapter), assured consistent, high quality interviewing during data collection. In addition, all Macro employees sign a statement of confidentiality on the date of hire. A copy of Macro's confidentiality statement can be found in *Appendix B: Confidentiality Agreement*.

The quality of data collection depends largely on the performance of the interviewing staff. A description of interviewers' qualifications for this survey can be found in *Appendix C: Qualifications of Interviewers*. Macro's training sessions for the 2008 MATS NRFU survey focused on these important aspects:

Introduction to the Survey. The first part of Macro's training introduced the interviewers to the survey's purpose and scope. This part of the training explained the significance of a high response rate, the effect that a high number of refusals has on the study, the importance of confidentiality, the study's purpose, and any unique terminology.

Introduction to Sampling. The second section discussed the type of sampling being used in the 2008 MATS NRFU and described the interview targets. In this section, the importance of making multiple attempts and converting refusals using the special refusal conversion protocol was stressed.

The Role of Macro. In this training section, the role of each member of Macro's project team was explained to the interviewers. Specifically, this portion of the training covered the roles of project managers, the data collection management team, the interviewers, the quality assurance assistants, and the data processing team.

Approaches to Interviewing. This section focused on how to move a respondent through the survey and ask the questions appropriately. Also emphasized in this section was keeping question non-response to a minimum and avoiding respondent refusals. Probing techniques included clarification of respondent responses, open-end verification, and re-reading of response categories. Protocols for the MATS NRFU were emphasized in this section—these included reading verbatim, respondent selection procedures, assuring respondent confidentiality, probing and clarifying, and dealing with refusals.

In-Depth Questionnaire Review. The next step in the training process provided an overview of the questionnaire and a brief review of the most important pieces of information related to administering the survey, such as the selection process, moving smoothly through the interview, use of dispositions, and leaving messages.

Administering the Questionnaire. This part of the training dealt specifically with administering the MATS NRFU. This included a word-for-word review of the questionnaire, done interactively with the CATI program. Each interviewer worked on a computer terminal and completed each screen of the CATI program. Many different scenarios—such as a variety of challenging respondent reactions, skip patterns and disposition protocols—gave the interviewer a better understanding of the CATI program and the questionnaire.

Training notes for this study can be found in *Appendix D: Study Specific Training Tool*.

Collecting Respondent Information. Issuing incentives to respondents requires much organization and accurate intake of the respondent's information. Interviewers on the MATS NRFU study were specifically trained to collect the correct spelling of respondents' names and addresses, and to verify accuracy to ensure that the incentives would be delivered to the respondents with few, if any, delays.

VII. ISSUES WITH DATA COLLECTION

Only one issue surfaced during the data collection process:

The combination of advance letters and incentives helped tremendously with data collection efforts. Macro obtained the desired target of 3,000 interviews and data collection ended early on February 4, 2008. At the conclusion of data collection, 32,921 records of the records loaded (45%) had never been dialed. The table below provides the dispositions for the remaining 39,937 records that were dialed but not necessarily brought to full protocol at the time data collection ended.

Disposition	Total	Total %
1: Complete	3548	8.9%
2: Refused after selection	2516	6.3%
3: Nonworking	3280	8.2%
4: Ring no answer	8243	20.6%
5: Not private residence	369	0.9%
6: No eligible respondent	3	0.0%
7: Selected not available	10995	27.5%
8: Language barrier	75	0.2%
9: Mid-terminate	89	0.2%
10: Line busy	862	2.2%
11: Impairment	100	0.3%
12: Technological barrier	5285	13.2%
14: Hangup before selection	4572	11.4%
	39937	100%

VIII. RESPONSE RATES

Response rates provide a measure of interviewing success. Since the sample for MATS NRFU consisted of records from 2006 MATS that did not yield a completed interview, Macro anticipated needing more sample than was actually necessary to achieve target completes. The response rates below reflect the excess sample loaded for MATS NRFU. Response rate formulas used to derive the following calculations can be found in *Appendix E: Response Rate Formulas*.

Response Rates for the 2008 MATS NRFU Study

CASRO	10.5%
Overall	17%
Cooperation	57.9%
Refusal Conversion	6.3%

IX ANALYSIS AND SUMMARY TABLES

Overview

As previously discussed, the purpose of the MATS NRFU is to ascertain the tobacco-use behaviors of those who did not respond to the 2006 MATS and to contrast the tobacco-use behaviors of this population to those that did participate, or more simply, to find out if MATS nonrespondents are different from MATS respondents. If respondents and nonrespondents are substantively different, survey estimates are biased. To evaluate the differences between nonrespondents and respondents and the impact on survey estimates, we compare the MATS respondents to the NRFU respondents (MATS nonrespondents). The analysis and interpretation of results are based on the assumption that the NRFU respondents are representative of the MATS nonrespondents.

We examine the differences between survey nonrespondents and respondents based on demographics and substantive survey data including smoking prevalence and plans to quit smoking. For operational purposes, we classified nonrespondents into two groups:

- Selected nonrespondents, cases where we rostered the household and selected an adult to conduct the interview, and
- Nonselected nonrespondents, cases where the household was not rostered and an adult had yet to be selected.

For the selected nonrespondents, we attempted to reach the person who was originally selected. For the nonselected nonrespondents, we randomly selected a person in the household to interview following the same protocol used for MATS.

While these two groups were identified for operational purposes, they offer the opportunity to evaluate nonresponse for nonrespondent types who have had different levels of exposure to the survey. Selected nonrespondents include those who have been informed of the intent of the survey (including **“We’re gathering information on attitudes, use, and exposure to tobacco products”**), and possibly even completed some questions (survey midterminates). In all of these cases, we have informed at least one person in the household of the survey, though we may not have had the chance to speak with the selected respondent.

Nonselected respondents are a combination of those who hang up before learning about the intent of the survey and those who have listened long enough to learn about the intent. In all of these cases, we did not proceed far enough into the survey to allow for a household rostering and selection.

Typically, adjusting for nonresponse involves weighting the respondents in such a way to account for the nonrespondents. These adjustments reduce potential bias to the extent that the nonrespondents and respondents with similar geographic, demographic, and socioeconomic characteristics are also similar with respect to the survey statistics of interest. So while differences in nonrespondents and respondents may suggest biased estimates, the weighting adjustments may correct the bias if respondents and nonrespondents with similar characteristics are also similar in their survey responses. To examine whether respondents and nonrespondents who are demographically similar are also substantively similar, we compare the weighted respondents and the weighted nonrespondents. The weighting adjusts the respondents and nonrespondents so that they have the same demographic distribution with respect to age, sex, and race. A decrease in differences for the adjusted estimates suggests that demographic weighting reduces bias in the survey estimates. No decrease in differences suggests that respondents and nonrespondents are not similar in terms of the substantive results even when adjusting the estimates for demographic characteristics.

As a final evaluation, we examine how the MATS estimates would have changed had the MATS nonrespondents originally responded to the survey. Since the nonrespondents did not respond, they are replaced with new

respondents. Then, the data is weighted to mitigate potential biases due to nonresponse. If the nonrespondents had responded, we wouldn't have needed to replace them with new respondents. To evaluate the effect of the replacements and weighting, we calculate differences between the estimates with and without the MATS nonrespondents.

Responders versus Nonresponders and Selected versus Nonselected

Macro compiled summary tables comparing demographics of respondents that did participate in the MATS, with those that did not participate in the MATS. These summary tables are below, Tables 1A, and 1B through Tables 5A and 5B. Analysis was conducted using the SURVEYMEANS procedure in SAS.

Tables 1A and 1B compare responders and nonresponders (NRFU) by minority status, 2A and 2B compare these groups by race, 3A and 3B by targeted minority, 4A and 4B by sex, and 5A and 5B by age. The demographic comparisons between the MATS respondents and nonrespondents are very similar in terms of race with 80 percent reporting that they are white. The percentage of males in the NRFU sample is four percentage points higher than the original MATS, 42 versus 38 percent. The NRFU respondents tend to be older than the original MATS respondents with 67% of the respondents 50 or older. This is much higher than the 56 percent of respondents 50 or older in the original MATS.

Table 1A: NRFU Minority Status

Minority Status	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
Minority	691	1,349,397	19.6%	33.6%	+/-2.1%
Caucasian	2826	2,665,637	80.4%	66.4%	+/-2.1%

Table 1B: MATS Minority Status

Minority Status	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
Minority	4225	1,418,048	19.8%	35.7%	+/-0.9%
Caucasian	17158	2,558,332	80.2%	64.3%	+/-0.9%

Table 2A: NRFU Race²

Race	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
White	2826	2,665,637	80.4%	66.4%	+/-2.1%

² Any analysis by race or minority status for the original MATS report includes Hispanic origin. For the 2006 table Hispanic origin was removed in order make the definitions compatible with the NRFU study.

Race	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
Black	553	964,797	15.7%	24.0%	+/-1.9%
Asian	67	203,084	1.9%	5.1%	+/-1.2%
Other	51	158,318	1.5%	3.9%	+/-1.1%

Table 2B: MATS Race³

Race	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
White	17158	2,558,332	80.2%	64.3%	+/-0.9%
Black	3194	1,058,925	14.9%	26.6%	+/-0.8%
American Indian	212	46,462	1.0%	1.2%	+/-0.2%
Asian	299	118,301	1.4%	3.0%	+/-0.4%
Native Hawaiian/Pacific Islander	42	13,227	0.2%	0.3%	+/-0.1%
Other	478	181,133	2.2%	4.6%	+/-0.5%

Table 3A: NRFU Targeted Minority

Targeted Minority	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
Targeted Minority	2304	2,755,719	65.2%	68.1%	+/-1.9%
White Male	1232	1,293,544	34.8%	31.9%	+/-1.9%

Table 3B: MATS Targeted Minority

Targeted Minority	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
Targeted Minority	15033	2,783,405	69.5%	69.3%	+/-0.8%
White Male	6584	1,234,479	30.5%	30.7%	+/-0.8%

³ Table 2B includes rows for American Indian and Native Hawaiian/Pacific Islander. There were not enough of either of these categories in the 2008 NRFU study to report.

Table 4A: NRFU Sex

Sex	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
Male	1483	1,919,865	41.8%	47.2%	+/-2.2%
Female	2065	2,148,457	58.2%	52.8%	+/-2.2%
Total	3548	4,068,322	100.0%	100.0%	

Table 4B: MATS Sex

Sex	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
Male	8259	1,920,149	37.9%	47.2%	+/-0.9%
Female	13540	2,148,503	62.1%	52.8%	+/-0.9%
Total	21799	4,068,652	100.0%	100.0%	

Table 5A: NRFU Age

Age	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
18-24	105	419,444	3.0%	10.4%	+/-1.7%
25-29	97	300,170	2.8%	7.4%	+/-1.4%
30-39	388	866,129	11.0%	21.4%	+/-2.0%
40-49	567	784,101	16.1%	19.4%	+/-1.6%
50-59	809	804,231	23.0%	19.9%	+/-1.5%
60-69	702	426,173	20.0%	10.5%	+/-1.0%
70+	845	440,709	24.1%	10.9%	+/-1.0%

Table 5B: MATS Age

Age	Unweighted N	Weighted N	Unweighted Percent	Weighted Percent	90% Margin of Error
18-24	912	457,246	4.3%	11.5%	+/-0.8%
25-29	1022	317,261	4.8%	8.0%	+/-0.5%
30-39	3184	764,594	14.9%	19.2%	+/-0.7%
40-49	4367	860,640	20.4%	21.6%	+/-0.7%
50-59	4689	729,487	21.9%	18.3%	+/-0.6%
60-69	3690	453,307	17.3%	11.4%	+/-0.5%
70+	3501	404,647	16.4%	10.1%	+/-0.4%

Comparing MATS to NRFU

Tables 6A, 6B, and 6C compare estimates from the NRFU study to the MATS study. Overall the smoking rates for MATS and NRFU are very similar, 12.5% and 13.3% respectively, shown in the first row of Table 6C below. Table 6A compares planned quit attempts of participants and non-participants by all adult current smokers; Table 6B illustrates this for minority current smokers. A much larger percentage of MATS respondents report that they have no plan to quit relative to the NRFU respondents: 21.3 to 9.8 percent, as shown in the bottom row of Table 6A below. Of those who do plan to quit, the difference between MATS respondents and nonrespondents is within the 3-12 month range. MATS and NRFU respondents were similar in their plans to quit within 30 days and over one year.

Table 6C looks at current smoking rates overall and broken down by age, minority status, sex, region, and jurisdiction. For each demographic category, a T-test was used to measure the difference in smoking rates between the NRFU and MATS studies. Smoking rates for MATS and NRFU respondents are similar for men and women. Minority NRFU respondents reported a higher smoking rate than MATS respondents, 15.5 to 12.2 percent, as shown in table 6C under the row "minority". The smoking rates for NRFU and MATS respondents also differed for several age ranges: 18-24, 25-29, 30-39, and 40-49, shown in Table 6C under the row "age". In each case, the NRFU smoking rate is higher.

Table 6A: PlanQuit-All Adult Current Smokers, MATS and NRFU

(p=<0.0001)

Q73A "Are you seriously planning to quit smoking cigarettes?"

		2006 MD ATS				2006 MD NRFU			
		Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent
Total									
Total	Within the next 30 days	2503	442	12,906	18.4% (+/- 2.9%)	470	87	2,098	17.8% (+/- 5.4%)
Total	Within the next 3 months	2503	362	10,040	14.3% (+/- 2.4%)	470	85	1,782	15.1% (+/- 3.5%)
Total	Within the next 6 months	2503	279	7,535	10.8% (+/- 1.8%)	470	79	2,441	20.7% (+/- 5.9%)
Total	Within the next 12 months	2503	363	10,491	15.0% (+/- 2.5%)	470	86	1,991	16.9% (+/- 4.0%)
Total	Within the next 5 years	2503	306	9,318	13.3% (+/- 2.2%)	470	63	1,703	14.4% (+/- 3.2%)
Total	Sometime after 5 years	2503	156	4,818	6.9% (+/- 1.8%)	470	23	638	5.4% (+/- 2.4%)
Total	Not planning on quitting	2503	595	14,918	21.3% (+/- 2.8%)	470	47	1,156	9.8% (+/- 3.7%)

Table 6B: PlanQuit- Minority Adult Current Smokers, MATS and NRFU

(*p=0.1620*)

Q73A "Are you seriously planning to quit smoking cigarettes?"

		2006 MD ATS				2006 MD NRFU			
		Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent
Total									
Total	Within the next 30 days	560	145	4,127	24.5% (+/- 5.1%)	122	31	648	21.8% (+/- 7.1%)
Total	Within the next 3 months	560	91	3,362	19.9% (+/- 5.1%)	122	26	643	21.7% (+/- 8.6%)
Total	Within the next 6 months	560	78	2,146	12.7% (+/- 3.7%)	122	18	641	21.6% (+/- 10.1%)
Total	Within the next 12 months	560	72	1,981	11.7% (+/- 3.4%)	122	25	556	18.8% (+/- 7.2%)
Total	Within the next 5 years	560	60	2,128	12.6% (+/- 4.4%)	122	14	282	9.5% (+/- 6.1%)
Total	Sometime after 5 years	560	25	798	4.7% (+/- 2.2%)	122	2	40	1.3% (+/- 1.2%)
Total	Not planning on quitting	560	89	2,337	13.8% (+/- 3.6%)	122	6	154	5.2% (+/- 4.8%)

Table 6C: Smoke CDC1, MATS and NRFU

The following table displays Current Smokers by Minority Status, Sex, Region and Jurisdiction with significance testing result (T-test and P-Value). A current smoker is defined as a respondent who answers "yes" to Q22, "[h]ave you smoked at least 100 cigarettes in your entire life," AND if they answered "every day or "some days" to Q23, "[d]o you now smoke cigarettes every day, some days, or not at all?"

		2006 MD ATS				2006 MD NRFU					
		Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent	T	P
Total											
Total		21696	2,787	76,218	12.5% (+/- 0.7%)	3537	501	12,662	13.3% (+/- 1.7%)	-0.882	0.036
Age											
18-24		906	203	8,102	22.4% (+/- 4.3%)	105	30	1,119	25.8% (+/- 10.3%)	-0.586	0.078

	2006 MD ATS				2006 MD NRFU				T	P
	Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent		
25-29	1018	205	7,260	20.8% (+/- 4.1%)	97	32	838	29.6% (+/- 12.8%)	-1.288	0.010
30-39	3177	418	10,540	11.3% (+/- 1.7%)	386	60	1,375	13.0% (+/- 3.9%)	-0.780	0.047
40-49	4351	687	18,261	14.1% (+/- 1.7%)	567	108	2,993	17.8% (+/- 4.3%)	-1.540	0.004
50-59	4670	665	18,507	13.8% (+/- 1.8%)	808	135	3,099	13.2% (+/- 2.9%)	0.309	0.143
60-69	3678	381	8,392	9.3% (+/- 1.4%)	696	83	1,632	10.0% (+/- 3.0%)	-0.400	0.119
70+	3471	194	4,112	5.1% (+/- 1.1%)	844	52	1,434	7.2% (+/- 4.2%)	-0.900	0.034
Minority										
Minority	4477	623	18,421	12.2% (+/- 1.3%)	689	129	3,204	15.5% (+/- 3.2%)	-1.918	0.001
Caucasian	16811	2,111	56,284	12.6% (+/- 0.9%)	2818	370	9,417	12.9% (+/- 2.0%)	-0.250	0.161
Sex										
Male	8220	1,230	33,969	14.2% (+/- 1.2%)	1478	239	6,310	15.2% (+/- 2.8%)	-0.624	0.071
Female	13476	1,557	42,249	11.4% (+/- 0.9%)	2059	262	6,352	11.9% (+/- 1.9%)	-0.438	0.109
Region										
Baltimore Region	8398	1,077	40,567	14.0% (+/- 1.3%)	1395	213	7,084	15.5% (+/- 3.0%)	-0.906	0.033
Suburban Washington Region	3924	355	16,488	8.5% (+/- 1.0%)	573	53	2,306	8.1% (+/- 2.4%)	0.336	0.136
Southern Maryland Region	2340	297	4,852	13.0% (+/- 1.6%)	343	47	833	14.6% (+/- 4.3%)	-0.713	0.057
Western Maryland Region	2204	330	5,315	14.9% (+/- 1.8%)	402	50	824	13.0% (+/- 3.7%)	0.913	0.033
Upper Eastern Shore Region	2779	416	5,190	16.1% (+/- 1.7%)	413	71	906	19.1% (+/- 4.4%)	-1.303	0.009
Lower Eastern Shore Region	2051	312	3,806	16.9% (+/- 2.7%)	411	67	710	16.9% (+/- 4.3%)	0.031	0.238
Jurisdiction										
Allegany County	677	104	1,904	15.7% (+/- 3.3%)	112	14	267	14.1% (+/- 7.5%)	0.382	0.123
Anne Arundel County	1655	199	8,061	12.4% (+/- 1.8%)	228	34	1,397	16.8% (+/- 5.7%)	-1.462	0.005

	2006 MD ATS				2006 MD NRFU				T	P
	Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent		
Baltimore County	1378	228	16,656	15.7% (+/- 3.1%)	168	26	2,100	13.0% (+/- 7.1%)	0.678	0.062
Calvert County	650	87	1,456	14.7% (+/- 3.2%)	97	10	142	9.8% (+/- 6.2%)	1.411	0.006
Caroline County	423	63	664	14.2% (+/- 3.8%)	57	9	112	18.4% (+/- 11.9%)	-0.656	0.066
Carroll County	940	116	2,467	12.3% (+/- 2.4%)	188	23	604	14.6% (+/- 6.4%)	-0.641	0.068
Cecil County	1035	184	2,434	19.2% (+/- 2.9%)	151	34	426	23.0% (+/- 7.5%)	-0.930	0.031
Charles County	967	112	1,890	11.8% (+/- 2.3%)	147	24	484	18.5% (+/- 7.5%)	-1.704	0.002
Dorchester County	450	69	639	16.7% (+/- 4.1%)	87	12	132	16.2% (+/- 9.1%)	0.103	0.211
Frederick County	1055	103	2,981	9.9% (+/- 2.0%)	172	24	815	15.8% (+/- 6.0%)	-1.820	0.001
Garrett County	564	87	801	14.5% (+/- 3.2%)	95	11	110	12.0% (+/- 7.5%)	0.614	0.073
Harford County	1421	199	4,823	15.1% (+/- 2.2%)	235	32	716	13.1% (+/- 4.6%)	0.792	0.046
Howard County	1641	99	2,092	6.4% (+/- 1.4%)	270	24	519	9.8% (+/- 4.1%)	-1.515	0.004
Kent County	454	51	467	12.1% (+/- 3.8%)	58	9	96	18.6% (+/- 11.1%)	-1.069	0.020
Montgomery County	1444	105	7,568	7.1% (+/- 1.5%)	208	7	572	3.6% (+/- 2.8%)	2.169	0.000
Prince Georges County	1425	147	5,939	10.4% (+/- 1.8%)	193	22	919	12.3% (+/- 5.4%)	-0.661	0.065
Queen Annes County	439	63	923	15.3% (+/- 4.0%)	78	11	162	16.9% (+/- 9.8%)	-0.297	0.147
St. Mary's County	723	98	1,505	13.1% (+/- 2.8%)	99	13	207	12.7% (+/- 7.1%)	0.122	0.204
Somerset County	467	73	420	18.2% (+/- 7.5%)	110	23	120	24.8% (+/- 10.1%)	-1.019	0.024
Talbot County	428	55	703	13.9% (+/- 3.9%)	69	8	109	13.6% (+/- 10.5%)	0.036	0.236
Washington County	963	139	2,609	14.6% (+/- 2.5%)	195	25	447	12.7% (+/- 5.0%)	0.633	0.069
Wicomico County	679	99	1,697	17.2% (+/- 5.2%)	124	21	298	18.0% (+/- 7.4%)	-0.172	0.187
Worcester County	455	71	1,050	16.2% (+/- 3.8%)	90	11	160	12.8% (+/- 7.8%)	0.771	0.048
Baltimore City	1363	236	6,467	19.6% (+/- 3.8%)	306	74	1,748	28.1% (+/- 6.1%)	-2.338	0.000

The comparisons so far have been based on design weighted data. This means that demographic differences in the NRFU respondents relative to the MATS respondents may be contributing to smoking differences or lack of differences. Overall there is no difference in the smoking rates for MATS and NRFU, yet for all age ranges under 50, the smoking rate is higher for the NRFU respondents. In the previous section, we saw that the NRFU respondents tended to be older than the MATS respondents. Thus the lack of differences between the NRFU and MATS respondents may be due to differences in the demographic make-up of the two groups rather than similarities in smoking behavior. To remove the effects of demographic differences, we weight both samples by age, sex and race.

After weighting for demographics, the percentage of smokers in MATS is lower than NRFU overall, 14 compared to 17 percent. Smoking rates in MATS are also lower for males and females and minority and white respondents. See table 6D below. This suggests that once the differences in demographics between the samples are adjusted, NRFU respondents have higher smoking rates. Observing higher smoking rates for nonrespondents in many age groups and for minorities suggests that weighting adjustments are not adequately correcting for biases. Biases survey estimates are not explained by correcting demographic biases inherent in the sample.

Table 6D. Current Smoking Weighted by Final Weight

Current Smokers	MATS				NRFU				T-test	P
	Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent		
Total										
Total	21696	2,787	556,955	13.8% (+/- 0.8%)	3537	501	686,361	16.9% (+/- 2.0%)	-2.892	0.000
Minority										
Minority	4477	623	200,009	13.2% (+/- 1.4%)	689	129	244,824	18.2% (+/- 4.1%)	-2.268	0.000
Caucasian	16811	2,111	345,280	14.1% (+/- 0.9%)	2818	370	437,339	16.4% (+/- 2.3%)	-1.823	0.001
Sex										
Male	8220	1,230	303,835	15.9% (+/- 1.3%)	1478	239	393,401	20.5% (+/- 3.4%)	-2.557	0.000
Female	13476	1,557	253,120	11.8% (+/- 0.9%)	2059	262	292,960	13.7% (+/- 2.2%)	-1.539	0.004
Region										
Baltimore Region	8398	1,077	303,417	16.1% (+/- 1.3%)	1395	213	378,811	20.8% (+/- 3.5%)	-2.503	0.000

Current Smokers	MATS				NRFU				T-test	P
	Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent		
Suburban Washington Region	3924	355	133,763	9.3% (+/- 1.2%)	573	53	110,047	8.7% (+/- 2.8%)	0.381	0.124
Southern Maryland Region	2340	297	33,966	14.7% (+/- 2.0%)	343	47	53,705	18.5% (+/- 6.9%)	-1.044	0.022
Western Maryland Region	2204	330	29,177	16.6% (+/- 2.2%)	402	50	49,259	17.0% (+/- 6.2%)	-0.106	0.209
Upper Eastern Shore Region	2779	416	30,151	17.6% (+/- 2.0%)	413	71	58,024	27.7% (+/- 8.5%)	-2.288	0.000
Lower Eastern Shore Region	2051	312	26,481	18.3% (+/- 2.7%)	411	67	36,517	19.4% (+/- 5.9%)	-0.350	0.132
Jurisdiction										
Allegany County	677	104	9,627	18.2% (+/- 4.4%)	112	14	16,529	21.9% (+/- 13.3%)	-0.523	0.090
Anne Arundel County	1655	199	51,344	14.0% (+/- 2.2%)	228	34	87,185	23.1% (+/- 8.7%)	-1.967	0.001
Baltimore County	1378	228	101,876	17.5% (+/- 2.9%)	168	26	68,171	14.8% (+/- 6.7%)	0.708	0.057
Calvert County	650	87	11,020	17.2% (+/- 4.3%)	97	10	6,501	9.6% (+/- 7.5%)	1.729	0.002
Caroline County	423	63	3,585	15.5% (+/- 4.5%)	57	9	7,393	24.3% (+/- 17.6%)	-0.948	0.029
Carroll County	940	116	16,844	13.8% (+/- 3.0%)	188	23	40,640	21.8% (+/- 11.4%)	-1.332	0.008
Cecil County	1035	184	15,320	21.3% (+/- 3.6%)	151	34	20,184	25.7% (+/- 10.6%)	-0.762	0.050
Charles County	967	112	12,840	12.9% (+/- 2.9%)	147	24	31,385	22.1% (+/- 11.4%)	-1.532	0.004
Dorchester County	450	69	3,907	16.4% (+/- 4.7%)	87	12	7,788	19.6% (+/- 15.8%)	-0.376	0.125

Current Smokers	MATS				NRFU				T-test	P
	Sample Size	Unwt. N	Wtd. N	Percent	Sample Size	Unwt. N	Wtd. N	Percent		
Frederick County	1055	103	18,149	11.6% (+/- 2.5%)	172	24	44,282	17.9% (+/- 8.5%)	-1.416	0.006
Garrett County	564	87	3,702	16.5% (+/- 3.8%)	95	11	6,482	16.1% (+/- 12.0%)	0.058	0.227
Harford County	1421	199	30,444	17.4% (+/- 2.8%)	235	32	35,788	16.2% (+/- 7.4%)	0.277	0.153
Howard County	1641	99	15,264	7.9% (+/- 2.1%)	270	24	36,875	15.3% (+/- 7.8%)	-1.788	0.001
Kent County	454	51	2,200	15.1% (+/- 5.5%)	58	9	12,370	44.4% (+/- 30.1%)	-1.887	0.001
Montgomery County	1444	105	51,176	7.5% (+/- 1.8%)	208	7	23,762	3.8% (+/- 3.1%)	2.005	0.001
Prince Georges County	1425	147	64,438	10.8% (+/- 2.1%)	193	22	42,003	10.7% (+/- 5.3%)	0.027	0.239
Queen Annes County	439	63	5,303	15.4% (+/- 4.2%)	78	11	8,618	19.3% (+/- 14.7%)	-0.499	0.095
St. Mary's County	723	98	10,106	15.0% (+/- 3.6%)	99	13	15,819	19.7% (+/- 13.2%)	-0.668	0.064
Somerset County	467	73	3,450	19.9% (+/- 7.3%)	110	23	10,523	41.5% (+/- 17.1%)	-2.292	0.000
Talbot County	428	55	3,742	13.5% (+/- 4.2%)	69	8	9,459	33.5% (+/- 27.7%)	-1.403	0.006
Washington County	963	139	15,848	15.8% (+/- 2.9%)	195	25	26,248	15.1% (+/- 7.9%)	0.183	0.183
Wicomico County	679	99	12,170	18.7% (+/- 4.6%)	124	21	11,886	17.1% (+/- 8.0%)	0.341	0.134
Worcester County	455	71	6,955	18.0% (+/- 4.6%)	90	11	6,320	11.9% (+/- 8.8%)	1.204	0.013
Baltimore City	1363	236	87,645	19.5% (+/- 2.8%)	306	74	110,152	32.8% (+/- 8.3%)	-3.006	0.000

Comparing selected vs. unselected respondents within the NRFU Study

When breaking the comparisons further into type of nonrespondent, selected versus nonselected, the smoking rate is a little higher overall for selected nonrespondents, 14 percent versus 13 percent for original MATS respondents (Table 7A). When the analysis is restricted to minorities, the smoking rate is considerably higher, 18 versus 12 percent (Table 7B). Only 8 percent of selected nonrespondents report that they don't plan to quit. This is much lower than the MATS estimate of 21.3 percent (Table 7C). The MATS percentage of minorities who don't plan to quit is much smaller than the percentage for all adults 13.8 percent. Similarly the selected nonrespondents are much lower at 4.1 percent (Table 7D). These comparisons are based on design-weighted data.

Table 7A. Current Smoking, All Adults

		User	Non-User
	N	Percent C.I. (95%)	Percent C.I. (95%)
Total			
Total	705,997 (25233)	12.6% (11.9%-13.3%)	87.4% (86.7%-88.1%)
Previous Selection			
Respondent Selected (a)	55,751 (2001)	14.4% (12.0%-16.9%)	85.6% (83.1%-88.0%)
Respondent Not Selected (b)	39,433 (1536)	11.7% (9.6%-13.8%)	88.3% (86.2%-90.4%)
Original Interview (c)	610,812 (21696)	12.5% (11.7%-13.2%)	87.5% (86.8%-88.3%)

Table 7B. Current Smoking, Minorities

		User	Non-User
	N	Percent C.I. (95%)	Percent C.I. (95%)
Total			
Total	172,271 (5166)	12.6% (11.3%-13.8%)	87.4% (86.2%-88.7%)

		User	Non-User
	N	Percent C.I. (95%)	Percent C.I. (95%)
Previous Selection			
Respondent Selected (a)	11,465 (368)	18.0% (13.2%-22.7%) ^C	82.0% (77.3%-86.8%) ^C
Respondent Not Selected (b)	9,210 (321)	12.4% (8.7%-16.2%)	87.6% (83.8%-91.3%)
Original Interview (c)	151,597 (4477)	12.2% (10.8%-13.5%) ^a	87.8% (86.5%-89.2%) ^a

Table 7C PlanQuit

Q 37A. Are you seriously planning to quit smoking cigarettes?

Quit Plans-All Adult Current Smokers	NRFU Respondent Selected (a)	NRFU Respondent Not Selected (b)	2006 MATS (c)
N	273	197	2503
Next 30 days	19.8% (12.5%-27.2%)	14.3% (6.4%-22.2%)	18.4% (15.6%-21.3%)
Next 3 months	12.9% (8.9%-16.9%)	18.7% (11.7%-25.8%)	14.3% (12.0%-16.7%)
Next 6 months	20.1% (12.5%-27.8%) ^C	21.6% (12.3%-30.9%) ^C	10.8% (9.0%-12.5%) ^{ab}
Next 12 months	17.0% (11.4%-22.5%)	16.7% (10.8%-22.6%)	15.0% (12.5%-17.5%)
Next 5 years	15.7% (11.8%-19.7%)	12.2% (6.7%-17.7%)	13.3% (11.1%-15.5%)
After 5 years	6.6% (3.1%-10.1%)	3.4% (0.3%-6.5%)	6.9% (5.1%-8.7%)
Not planning on quitting	7.8% (3.3%-12.4%) ^C	13.0% (6.8%-19.2%) ^C	21.3% (18.5%-24.1%) ^{ab}

Table 7D PlanQuit--Minority Current Smokers

Q 37A. Are you seriously planning to quit smoking cigarettes?

Quit Plans-Minority Current Smokers	NRFU Respondent Selected (a)	NRFU Respondent Not Selected (b)	2006 MATS (c)
N	75	47	560
Next 30 days	25.8% (16.1%-35.6%)	14.8% (4.7%-25.0%)	24.5% (19.3%-29.6%)
Next 3 months	19.7% (9.5%-29.9%)	25.2% (10.1%-40.2%)	19.9% (14.8%-25.1%)
Next 6 months	24.7% (11.2%-38.2%)	16.3% (4.9%-27.6%)	12.7% (9.0%-16.4%)
Next 12 months	18.7% (8.8%-28.6%)	18.8% (9.1%-28.5%)	11.7% (8.3%-15.2%)
Next 5 years	6.1% (0.9%-11.2%)	15.6% (3.0%-28.2%)	12.6% (8.2%-17.0%)
After 5 years	0.9% (0.0%-2.7%) ^C	2.1% (1.6%-2.7%) ^C	4.7% (2.5%-7.0%) ^{ab}
Not planning on quitting	4.1% (0.0%-9.4%) ^C	7.2% (0.0%-15.9%)	13.8% (10.3%-17.4%) ^a

Checking for Non-Response Bias

To evaluate the effect of the replacements and weighting, we calculate differences between the estimates with and without the MATS nonrespondents. The comparison is reduced to whether original respondents ($R1$) and replacement respondents ($R2$) adequately represent the original respondents and nonrespondents (NR). In both cases, the samples are weighted to the population, with w_R representing the weights for the original respondents and replacements and w_{NR} representing weights for the original respondents and the nonrespondents.

$$\begin{aligned}\hat{Y}_{R1+R2} - \hat{Y}_{R1+NR} &= \frac{1}{N} \left(\sum_{R1} w_R y + \sum_{R2} w_R y - \sum_{R1} w_{NR} y - \sum_{NR} w_{NR} y \right) \\ &= \frac{1}{N} \left(\sum_R (w_R - w_{NR}) y + \sum_{R2} w_R y - \sum_{NR} w_{NR} y \right)\end{aligned}$$

Bootstrap Process

The two estimates are not independent so the comparison must account for the fact that the original respondents are the same in both estimates (albeit with different weights.) To calculate the variance of for this complex comparison, we use a bootstrap estimator. Bootstrapping is a resampling procedure in which random samples are drawn from the observed data. The resampling is done with replacement. For this analysis, we applied two treatments to the resampling. In the *follow-up* treatment, we drew respondents from the pool of both the original MATS respondents and NRFU respondents. This sample is the sample of original respondents ($R1$) and nonrespondents (NR). Then, since the nonrespondents didn't originally respond, we create a second sample by taking the same original respondents ($R1$) and combining them with a replacement sample ($R2$). The replacement sample is selected with replacement from the MATS responders. Estimates for the two samples— $R1+R2$ and $R1+NR$ are then compared by calculating the difference.

In effect, the bootstrapping analysis was a computer simulation of the actual process of the survey. Suppose that on January 15, 2007 (part way through the original MATS), Macro had reached 18,800 respondents, which was about 3,000 short of quota. What we actually did at that point was to continue dialing until we had reached about 3,000 additional respondents —the post-stratification treatment in our bootstrapping analysis simulated that. Following the original MATS, we used post-stratification weights to adjust our estimates for nonresponse. In the NRFU study, Macro contacted individuals who had declined to participate in the original survey. That permitted us to include 3,000 respondents who had declined to participate in the original survey replacing the additional respondents we had reached after January 15, 2007 — the follow-up treatment in our bootstrapping analysis simulated that. The difference between that hypothetical scenario and the computer simulation in our bootstrapping analysis was that respondents to the original survey were not included or excluded from the bootstrapped samples based on the date of their participation.

Sample size within each geographic stratum was set to equal the numbers in the original MATS totaling 21,878 respondents. Macro used the SURVEYSELECT procedure in SAS to draw the two samples. Since the *post-stratification* and *follow-up* data sets differed only in whether the additional respondents (approximately 3,000 of the 21,878) were willing participants from January 2007 or re-contacted nonrespondents from January of 2008, for each pair we computed the difference between the estimated prevalence of interest (*follow-up* estimate minus *post-stratification* estimate). That difference is the effect size of the experimental treatment estimated by the bootstrapping procedure, i.e., the estimated bias incurred by relying on post-stratification weighting to account for nonresponse.

We generated 1,000 bootstrap samples. The samples were not reweighted. The median of the effect sizes is the bootstrap estimate of bias; the 2.5% and 97.5% quantiles are a 95% confidence interval about that estimate and

may be construed as a test of the null hypothesis that the difference equals zero. We rejected the null hypothesis if the 2.5% quantile was > 0 or the 97.5% quantile was < 0 .

Estimated prevalence of smoking was unbiased after the original MATS. The bootstrap estimate of median prevalence of smoking for all respondents was 12.9% based on respondents to the original MATS alone while it was 13.0% based on the pool of MATS and NRFU respondents.⁴ For demographic groups shown in Table A in Appendix H, the 95% confidence intervals show that we can state with confidence that the estimates after the original MATS were unbiased. For geographic regions where the number of respondents was generally about 2,500, we cannot conclude that the two estimates were equivalent with as much certainty, i.e., the lower confidence limit is less than -1% or the upper confidence limit is greater than 1%. Finally, for smaller geographic jurisdictions (counties and the city of Baltimore), while the difference between the two estimates was not significant in any instance, the number of respondents was generally too small to conclude equivalence with certainty, i.e., we did not have adequate statistical power to conclude that the two estimates were equivalent.

Based on the bootstrapping analysis, it appears that intention to quit smoking was biased low after the original MATS (Table B, Appendix H). Based on respondents to the original MATS only, the bootstrap estimate of the percentage of smokers who plan to quit was 78.2%, which was 1.93% lower than the corresponding estimate of 80.1% based on respondents to the MATS and the NRFU pooled. In particular, the estimate of the percentage of smokers who intend to quit within the next 6 or next 12 months was greater after conducting the NRFU than it had been after the original MATS (Table C, Appendix H). Conversely, the estimate of the percentage of smokers who intend to quit in shorter (next 30 days or next 3 months) or longer (next 5 years or after 5 years) timeframes was generally lower after conducting the NRFU than it had been after the original MATS. It should be noted that since the number of respondents in the original survey who said they were smokers and therefore were asked whether they intended to quit was only about 2,500, statistical power to detect significant differences in percentages intending to quit was limited.

Respondent Recall

Macro asked NRFU respondents two questions about their involvement in the MATS study. Tables 8 and 9 below show the number and percent of response types given for Q110 and Q111, of the NRFU: “[d]o you recall being called about a year ago by the Maryland Department of Health and Mental Hygiene to participate in a similar interview about tobacco use,” and “[c]an you recall why you chose not to participate at that time”. Table 10 lists the specific “other/specify” responses for Q111. Only 12 percent reported that they remembered being called. Of those who did remember, 39 percent reported that they didn’t have time for the survey. Thirty one percent reported that they didn’t know why they didn’t participate.

⁴ Prevalence estimates from the bootstrapping procedure differ from estimates reported elsewhere (e.g., Table 6) because a simpler weighting scheme was used in the bootstrap program. In the bootstrap program, post-stratification weights were based on sex and age only. More complex weighting within the bootstrap procedure would have been prohibitive given available computing resources.

Table 8: Recall

Q110 “Do you recall being called about a year ago by the Maryland Department of Health and Mental Hygiene to participate in a similar interview about tobacco use?”

	NRFU			
	Sample Size	Unwt. N	Wtd. N	Percent
Total				
Yes	2011	215	356,662	11.7% (+/- 2.2%)
No	2011	1,619	2,465,471	80.8% (+/- 2.5%)
Don't know	2011	176	230,161	7.5% (+/- 1.6%)
Refused	2011	1	339	0.0% (+/- 0.0%)

Table 9: Reason for not Participating

Q111 “Can you recall why you chose not to participate at that time?”** (details of the response “other/specify” are located in Table 9: Q111 Other/Specify Open-End Responses)

	NRFU			
	Sample Size	Unwt. N	Wtd. N	Percent
Total				
Busy/Didn't have time	215	76	138,129	38.7% (+/- 9.6%)
Interviewer was rude/not polite	215	0	0	0%
Didn't understand what interview was about	215	5	4,530	1.3% (+/- 1.2%)
I don't smoke	215	9	6,423	1.8% (+/- 1.5%)
Don't like to give personal information by phone	215	8	9,359	2.6% (+/- 2.7%)
Worried about confidentiality	215	2	2,572	0.7% (+/- 1.0%)
Not offered an incentive	215	0	0	0%
Other/specify	215	45	83,878	23.5% (+/- 8.7%)
Don't know	215	70	111,771	31.3% (+/- 8.2%)
Refused	215	0	0	0%

Table 10: Q111 Other/Specify Open-End Responses

NEVER HAD A PROBLEM
THOUGHT I'D JOIN CROWD
TIRED FROM WORK DIDN'T WANT TO TALK
DON'T THINK I WAS CALLED
DID COMPLETE SURVEY
TAKING TOO LONG
I DID PARTICIPATE
WAS TOLD HE WAS BEING CALLED BACK NEVER DID
DIDN'T KNOW HE WAS CONT SMOKING
DIDN'T FIND IT INTERESTING
NEVER CALLED BACK
HUSBAND WAS SICK WITH CANCER
HE THOUGHT HE DID
DIDN'T RECEIVE PREEMPTIVE LETTER
THOUGHT IT WAS A MACHINE
TWO NEWBORN TWINS
I WAS SICK
HAD A NEWBORN
TOO LENGTHY
COMPELLED BY THE LETTER THAT WAS MAILED
BECAUSE OF INVASION OF PRIVACY
WAS BEING PESTERED ABOUT IT
INCONVENIENT
SHE ALREADY PARTICIPATED
MIGHT NOT HAVE BEEN THERE
DID ONE BEFORE
DISLIKE PEOPLE CALLING ME, ON NO CALLING LIST
STARTED, BUT IT SEEMED LIKE IT WOULD NEVER END
DID PARTICIPATE
I DID PARTICIPATE
DID NOT WANT TO
I WAS PROBABLY SICK
I DID THE SURVEY(I THINK)
INTERVIEWER KEPT ASKING SAME QUESTIONS
WASN'T ABLE TO FINISH SURVEY
SAYS SHE DID PARTICIPATE
TOOK TOO LONG
WAS DOING SOMETHING? CAN'T REMEMBER
HER SON HAD DIED
THOUGHT IT WAS A TELEMARKETER
BECAUSE IT WAS 20 MIN
WIFE WOULD NOT DO SURVEY
I GOT TIRED OF LISTENING TO HER
GOT TIRED OF QUESTIONS IT TOOK TOO LONG
BECAUSE THE ANSWER WAS CONSTANTLY NO

APPENDIX A: THE 2008 MATS NRFU QUESTIONNAIRE

INTRO 1: NO RESPONDENT PREVIOUSLY SELECTED

Hello, I'm _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I'd like to ask some questions about use of tobacco products. The interview will take less than 5 minutes, and the person who is randomly selected will receive \$20 compensation for their time completing the survey. The information will be used to guide state and county health policies.

Is this _____ telephone number _____?

NO Thank you very much, but I seem to have dialed the wrong number. It's possible that your number may be called at a later time. STOP
YES=Continue

Is this a private residence?

NO Thank you very much, but we are only interviewing private residences. STOP
YES=Continue

We need to randomly select one adult who lives in your household to be interviewed. In order to make this random selection, can you please tell me how many members of your household, including yourself, are 18 years of age or older?

_____ # of adults [Range 1-18; confirm if > 5]

If 1 Are you the adult?

If "yes" Then you are the person I need to speak with.
GO TO SECTION 1

If "no" May I speak with him or her?
GO TO "CORRECT RESPONDENT"

If >1 How many of these adults are men? [Confirm if >5]

- 0. None
- 1. One
- 2. Two
- 3. Three
- 4. Four
- 5. Five
- 6. Six
- 7. Seven
- 8. Eight
- 9. Nine

How many of these adults are women? [Confirm if >5]

- 0. None
- 1. One
- 2. Two
- 3. Three
- 4. Four
- 5. Five
- 6. Six
- 7. Seven
- 8. Eight
- 9. Nine

The person in your household that I need to speak with is _____.

If “you” Go to Section 1

“Correct respondent”: Hello, I’m _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I’d like to ask some questions about use of tobacco products. The interview will take less than 5 minutes, and you will receive \$20 to compensate you for your time completing the survey. The information will be used to guide state and county health policies.

INTRO 2: RESPONDENT PREVIOUSLY SELECTED

Hello, I’m _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I’d like to ask [INSERT SELECTED RESP. DESCRIPTION] some questions about use of tobacco products. The interview will take less than 5 minutes, and you will receive \$20 to compensate you for your time completing the survey. The information will be used to guide state and county health policies.

Are you [INSERT SELECTED RESP. DESCRIPTION]?

If YES: Was this your phone number a year ago?

1. Yes
2. No
7. Don’t Know
9. Refused

[Skip to informed consent]

If NO, ask: Is [INSERT SELECTED RESP. DESCRIPTION] available?

If NO: Schedule callback

If YES, and transfers to the correct respondent:

Hello, I’m _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I’d like to ask some questions about use of tobacco products. The interview will take less than 5 minutes, and you will receive \$20 to compensate you for your time completing the survey. The information will be used to guide state and county health policies. Are you [INSERT SELECTED RESP. DESCRIPTION]?

Was this your phone number a year ago?

1. Yes
2. No
7. Don’t Know
9. Refused

INFORMED CONSENT – read to all respondents

The interview should take no more than 5 minutes, and may take much less. As a token of appreciation, we would like to offer you \$20 for completing the survey. Later, I’ll take your name and address information for the purposes of mailing a money order to you. This survey is completely voluntary and your answers to questions are confidential. Your name and address information will be kept separate from and will never be connected to your survey data. You can end the interview at any time, or if we get to a question you don’t want to answer, we can skip over it. If you have any questions about this survey, I will provide a telephone number for you to call to get more information. [Robert Fiedler - 410-767-6878]

This call may be monitored for quality control purposes.

1. What county do you live in?

- _____ County FIPS Code *Note: Baltimore City is NOT Baltimore County, probe.*
7. *Don't Know/Not Sure*
9. *Refused*

Q1chk. "I just want to make sure I got it correct, you said you live in the county of (insert county from Q1)_____?"

7. *Don't Know/Not Sure*
9. *Refused*

6. What is your age?

- _____ Age in years [Range 18-105]
7. *Don't Know/Not Sure*
9. *Refused*

REFERENCE VARIABLE:

AGELESS30="Yes" If Q6 ≠((7 OR 9) AND <30) AGELESS30

3. ASK ONLY IF NECESSARY [What is your gender?

1. Male
2. Female
7. *Don't Know/Not Sure*
9. *Refused*

REFERENCE VARIABLE:

FEMALE="Yes" If Q3 = "1" FEMALE

ALL RESPONDENTS

4. Which one or more of the following would you say is your race?

1. White
2. Black or African American
3. Asian
4. Native Hawaiian or Other Pacific Islander
5. American Indian, Alaskan Native
6. Other [Specify: _____]
7. *Don't Know/Not Sure*
9. *Refused*

4A. Where respondent identifies more than one race in Q4, follow up by asking: "Which one of these groups would you say best represents your race?"

1. White
2. Black or African American
3. Asian
4. Native Hawaiian or Other Pacific Islander
5. American Indian, Alaskan Native
6. Other [Specify: _____]
7. *Don't Know/Not Sure*
9. *Refused*

ALL RESPONDENTS

22. Have you smoked at least 100 cigarettes in your entire life? [Note: 100 cigarettes is equal to 5 packs)

- 1. Yes
- 2. No
- 7. *Don't Know/Not Sure*
- 9. *Refused*

REFERENCE VARIABLE:

EverSmoker = "Yes" if Q22 = Yes

EVERSMOKER

REFERENCE VARIABLE:

Never100Smoker = "Yes" if Q22 = No

NEVER100SMOKER

AGELESS30 RESPONDENTS

22A. How old were you the first time you smoked a cigarette, even one or two puffs?

- _____ Age in years [Range = 2<105; confirm if <6]
- 888. Never smoked cigarettes
- 7. *Don't Know/Not Sure*
- 9. *Refused*

EVERSMOKER RESPONDENTS

22B. How old were you when you first started smoking regularly?

- _____ Age in years [Range 2-105; confirm age is > = Q22A; Confirm age if <6; Confirm if Q22B – Q22A >3 years]
- 888. Never smoked cigarettes regularly
- 7. *Don't Know/Not Sure*
- 9. *Refused*

ALL RESPONDENTS

23. Do you now smoke cigarettes everyday, some days, or not at all?

- 1. Every day
- 2. Some days
- 3. Not at all
- 7. *Don't Know/Not Sure*
- 9. *Refused*

REFERENCE VARIABLE:

EveryDaySmoker = "Yes" if Q23 = 1

EVERYDAYSMOKER

23A. If Q22="Some Days" follow up by asking: "During the past 30 days, on how many days did you smoke cigarettes?"

- _____ Number of days
- 7. *Don't Know/Not Sure*
- 9. *Refused*

REFERENCE VARIABLE:

CurrentSmoker = "Yes" if Q23 = (1 or 2) AND Q22 = "Yes"

CURRENTSMOKER

REFERENCE VARIABLE:

FormerSmoker = "Yes" if Q23 = 3 AND Q22 = "Yes"

FORMERSMOKER

CURRENTSMOKER RESPONDENTS

24. On average, when you smoked during the past 30 days, about how many cigarettes did you smoke a day?

_____ Number of cigarettes smoked a day
7. *Don't Know/Not Sure* (SKIP TO Q67a)
9. *Refused* (SKIP TO Q67a)

CURRENTSMOKER RESPONDENTS

25. For approximately how many years have you been smoking [# cigarettes smoked daily from Q24] cigarettes a day?

_____ Number of years [Range 1-105; Confirm if >90]
7. *Don't Know/Not Sure*
9. *Refused*

FORMERSMOKER RESPONDENTS

62. About how long has it been since you last smoked cigarettes?

1. Less than 1 month
2. Within the past 2 months (1 to 2 months ago)
3. Within the past 6 months (3 to 6 months ago)
4. Within the past year (7 to 12 months ago)
5. Within the past 5 years (1 to 5 years ago)
6. Within the past 10 years (>5 years but <= 10 years ago)
7. Over 10 years ago
8. Never smoked cigarettes regularly
7. *Don't Know/Not Sure*
9. *Refused*

CURRENTSMOKER RESPONDENTS

- 67A. Do you ever expect to quit smoking?

1. Yes
2. No
7. *Don't Know/Not Sure*
9. *Refused*

CURRENTSMOKER RESPONDENTS

- 71A. Have you ever seriously considered quitting cigarette smoking?

1. Yes
2. No
7. *Don't Know/Not Sure*
9. *Refused*

CURRENTSMOKER RESPONDENTS

- 73A. Are you seriously planning to quit smoking cigarettes

1. Within the next 30 days
2. Within the next 3 months
3. Within the next 6 months
4. Within the next 12 months
5. Within the next 5 years
6. Sometime after 5 years
8. I am not planning on quitting

- 7. *Don't Know/Not Sure*
- 9. *Refused*

CURRENTSMOKER RESPONDENTS

74. Imagine that there are 10 steps in thinking about tobacco use. If you have NO thoughts of quitting, you would be at step 1. If you are taking some action right now, you are at step 10. What step would you say you are at in quitting?

- _____ Rung/Step
- 7. *Don't Know/Not Sure*
 - 9. *Refused*

ALL RESPONDENTS

90. How many of your four closest friends use any tobacco products?

- _____ Number of my four closest friends who use tobacco products
888. I don't have at least four close friends
- 7. *Don't Know/Not Sure*
 - 9. *Refused*

MATS 2006 SELECTED RESPONDENTS ONLY:

110. Do you recall being called about a year ago by the Maryland Department of Health and Mental Hygiene to participate in a similar interview about tobacco use?

- 1. Yes
- 2. No
- 7. *Don't Know/Not Sure*
- 9. *Refused*

ASK IF Q110 = 1

111. Can you recall why you chose not to participate at that time?

- 1. I was busy/I didn't have the time
- 2. The interviewer was rude/not polite
- 3. I didn't understand what the interview was about
- 4. I don't smoke
- 5. I don't like to give out personal information over the phone
- 6. I was worried about confidentiality
- 7. I was not offered an incentive
- 8. Other/specify
- 7. *Don't Know/Not Sure*
- 9. *Refused*

So that we can send you your \$20 money order, what is your full name and mailing address? (**VERIFY FULL NAME AND EACH LINE OF MAILING ADDRESS**)

CLOSING

Thank you very much for your participation in this important survey.

APPENDIX B: CONFIDENTIALITY AGREEMENT

STATEMENT OF POLICY

Macro International is firmly committed to the principle that the confidentiality of individual data obtained through Macro International surveys must be protected. This principal holds whether or not any specific guarantee of confidentiality was given at the time of interview (or self-response), or whether or not there are specific contractual obligations regarding confidentiality have been entered into, they may impose additional requirements which are to be adhered to strictly.

PROCEDURES FOR MAINTAINING CONFIDENTIALITY

- (1) All Macro International employees and field workers shall sign this assurance of confidentiality. This assurance may be suspended by another assurance for a particular project.
- (2) Field workers shall keep completely confidential the names of respondents, all information or opinions collected in the course of interviews, and any information about respondents learned incidentally during fieldwork. Field workers shall exercise reasonable caution to prevent access by other to survey data in their possession.
- (3) Unless specifically instructed otherwise for a particular project, an employee or files worker, upon encountering a respondent or information pertaining to a respondent that s/he knows personally, shall immediately terminate the activity and contact her/his supervisor for instructions.
- (4) Survey data containing personal identifiers in Macro International offices shall be kept in a locked container or a locked room when not being used each working day in routine survey activities. Reasonable caution shall be exercised in limiting access to survey data to only those persons who are working on the specific project and who have instructed in the application confidentiality requirements for that project. Where survey data has been determined to be particularly sensitive by the Corporate Officer in charge of the project or the President of Macro International, such survey data shall be kept in locked containers or in a locked room except when actually being used and attended by a staff member who has signed this pledge.
- (5) Ordinarily, serial numbers shall be assigned to respondents prior to creating a machine-processible record and identifiers such as name, address, and social security number shall not, ordinarily, be a part of the machine record. When identifies are part of the machine data record, Macro International's Manager of Data Processing shall be responsible for determining adequate confidentiality measures in consultation with the project director. When a separate file is set up containing identifiers or linkage information, which could be used to identify data records, this separate file, shall be kept locked up when not actually being used each day in routine survey activities.
- (6) When records with identifies are to be transmitted to another party, such as for keypunching or key taping, the other party shall be information of these procedures and shall sign an Assurance of Confidentiality form.
- (7) Each project director shall be responsible for ensuring that all personnel and contractors involved in handling survey data on a project are instructed in these procedures, have signed this pledge and comply with these procedures throughout the period of survey performance. When there are specific contractual obligations to the client regarding confidentiality, the project director shall develop additional procedures to comply with the project in these additional procedures. At the end of the period of survey performance, the project director shall arrange for proper storage or disposal of survey data including any particular contractual requirements for storage or

disposition. When required to turn over survey data to our clients, we must provide proper safeguards to ensure confidentiality up to the time of delivery.

- (8) Project directors shall ensure that survey practices adhere to the provisions of the US Privacy Act of 1974 with regards to surveys of individuals for the Federal Governments. Project directors must ensure that procedures are established in each survey to inform each respondent of the authority for the survey, the purpose and use of the survey, the voluntary nature of the (where applicable) and the effects of the respondents if any, of not responding.

PLEDGE

I hereby certify that I have carefully read and understand the aforementioned policies and procedures and will cooperate fully with them. I will keep completely confidential all information arising from surveys concerning individual respondents to which I gain access. I will not discuss, disclose, disseminate, or provide access to survey data and identifiers except as authorized by Macro International. In addition, I will comply with any additional procedures established by Macro International for a particular contract. I will devote my best efforts to ensure that there is compliance with the required procedures established by Macro International for a particular contract. I understand that violation of the privacy rights of individuals through such unauthorized discussion, disclosure, dissemination, or access may make me subject to criminal or civil penalties. I give my personal pledge that I shall abide by this assurance of confidentiality.

Print Name (Clearly Please)

_____/_____/2007
Signature Date

_____/_____/2007
Witness Signature Date

Please return this form to your supervisor after reviewing and signing.

APPENDIX C: QUALIFICATIONS OF INTERVIEWERS

QUALIFICATIONS OF INTERVIEWERS

Survey Staff

Macro places a high value on the recruitment, qualifications, and monitoring of the field and telephone interviewing staff. This section outlines the strategies and standards that Macro employs to ensure the consistent, accurate, and professional administration of surveys by the interviewers.

Interviewer Recruitment

Macro has an ongoing organizational commitment to interviewer recruitment. Continuous recruitment is necessary to accommodate growth in the contracted workload and to keep pace with the normal turnover that occurs in a large workforce.

To accomplish this goal, Macro remains in contact with the local market and maintains a database of available interviewers, enabling us to respond quickly to sudden increases in business volume or a need for special skills on short notice. Macro's continual interviewer recruitment process is managed by a full-time team that includes a full-time human resources manager, the data collection manager, a payroll supervisor, and a team of experienced interviewing supervisors located in each CATI Research Center. Telephone and field interviewers are recruited through the local daily and weekly newspapers, the college newspapers, and regular job fairs at colleges in the immediate vicinity. The CATI Research Center's human resource manager also works closely with the with local employment services offices.

Interviewer Qualifications

Prospective interviewers must meet certain criteria before becoming part of Macro's interviewing staff:

Communication skills. Interviewers must exhibit good communication skills and in order to be hired, must first undergo a job interview that seeks to evaluate their abilities in this area. During this interview, each applicant completes a brief spelling and keyboarding test, reads a standard diagnostic text, and is asked to participate in several role-playing exercises. These mock interviews involve hypothetical interviews with the recruiter. During the initial recruitment interview, recruiters assess the applicant's overall ability to understand, retain, and follow complex instruction information related to completing a survey. All interviewers must have a thorough command of the English language; additional languages are considered highly desirable as well. Bilingual interviewers may be specifically recruited to work on surveys administered in languages other than English.

Professional manner. Macro's recruiters are trained to look for clues regarding specific personality traits or qualities of prospective interviewers that will facilitate the tasks of interviewing. Good interviewers are persuasive, patient, calm, compassionate, optimistic, and empathetic. They must maintain a positive and fresh approach in a job that can be repetitive in nature. They must remain alert and focused as well as calm and courteous in the face of potential objections or outright rejection by respondents. Macro is fully aware of the importance of these qualities in a strong interviewing staff and works diligently to achieve them in the recruitment, hiring, and retention of interviewing staff.

General Training

Following recruitment, Macro's telephone interviewers receive initial training about the CATI program training and general telephone interviewing protocol before they participate in any project-specific training.

General training takes place over two days. The first day of general training introduces interviewers to survey research, the role of the interviewer, and the CATI system. These sessions also cover interviewing techniques: question reading, entering responses, probing for responses, the use of appropriate feedback, and avoiding refusals.

The second day of general training combines more advanced discussion of interviewing techniques with practice interviewing, monitored by supervisors and senior interviewers. Supervisors review interviewing techniques for handling challenging respondents, probing for answers in difficult situations, and the proper enumeration of eligible adults residing in a household at the time of contact. Following this discussion, interviewers conduct practice interviews with one another; interviews are monitored by a supervisor or senior interviewer, who introduces them to different situations that may arise during an interview. Interviewers who receive satisfactory monitoring scores are then allowed to conduct live calling on a practice project. Successful completion of practice calling means that an interviewer can be scheduled for a project training session.

APPENDIX D: STUDY SPECIFIC TRAINING TOOL

2008 Maryland Adult Tobacco Survey Non Response Follow-Up (MATS NRFU)

Interviewer Training Manual

Background on MATS NRFU

In November of 1998, the state of Maryland settled its lawsuit against the tobacco industry when it joined with 45 other states in signing the Master Settlement Agreement. In the spring of 1999, the Maryland General Assembly and Governor Glendening created the “Cigarette Restitution Fund” (CRF) as the repository of all settlement funds that Maryland received. In 2001, the General Assembly and Governor Glendening adopted legislation creating an aggressive new initiative against tobacco use in Maryland, titled the “Tobacco Use Prevention and Cessation Program.”

The program has a surveillance and evaluation component, which required the Maryland Department of Health and Mental Hygiene (DHMH) to conduct the Maryland Baseline Tobacco Study (MBTS), and report its results no later than January 1, 2001. The MBTS had two parts 1) the Maryland Youth Tobacco Survey (MYTS) and 2) the Maryland Adult Tobacco Survey (MATS). In the Fall of 2006 - 2007, we conducted the Third Annual MATS Baseline, statewide.

The MATS NRFU study will gather information on those respondents that did not participate in the 2006 MATS.

What is the purpose of the MATS NRFU?

The purpose of the MATS NRFU is to ascertain the tobacco-use behaviors of those who did not respond to the 2006 Maryland Adult Tobacco Survey (MATS) and to contrast the tobacco-use behaviors of this population to those that did participate. If differences are found to be statistically significant, this data may be used to develop more comprehensive estimates than are currently possible through use of the 2006 MATS data alone. National experience with adult tobacco surveys generally suggests that a higher proportion of current smokers refuse to participate in the survey than do non-smokers.

What happens to the MATS NRFU data after it is collected?

After you have collected the data, the data processing team at Macro in Burlington cleans, edits, and analyzes the data before we send it to the DHMH. This process includes cleaning the data that is entered into the “specify” responses in the questionnaire. During this process, each response is checked to see if it should have been coded as one of the response options that were provided. If it is, it will be changed, and if not, the response will be checked for spelling and delivered to the client verbatim.

The data processing department also codes the dispositions. All the dispositions you record must be coded as one of 12 final dispositions. This coding process is accomplished by looking at all the attempts made on each record and determining which final code is appropriate. For this reason, it is crucial that you record the correct disposition on every attempt.

Last, reports are run on the data to determine the response rate, how many records were required to complete the appropriate number of interviews, how many days it took to make the required number of attempts on all records, and ensure that there is no conflicting information in the data.

The Importance of Conducting High Quality Interviews

In making important decisions that will affect the health of millions of Americans, lawmakers and policymakers rely on the data collected in the MATS NRFU. They rely on the *validity* of the data collected. The MATS NRFU is the only link between the actual lives and habits of Maryland residents, and the decisions that are made by the DHMH, and people in decision-making positions.

The most important factor in obtaining valid, reliable data is the MATS NRFU interviewer. After the interviews are completed, the only records are the answers that the interviewers have recorded. Answers that are not recorded cannot be analyzed, and those that are recorded incorrectly cannot be analyzed correctly. It is important to be consistent in conducting the survey, and to obtain answers that are as accurate and complete as possible on every interview. Interviewing technique affects data quality, and data quality influences important decisions. *You are an important part of a team* not only at Macro, but Maryland statewide.

Sample Fielding

The sample for MATS NRFU is retrieved from the 2006 MATS. Eligible dispositions include:

- Respondent refused to participate after selection
- No eligible respondent was identified
- Selected respondent was not available
- Terminated call mid-way through the survey questionnaire
- Hang-up prior to selection of a respondent

Records from MATS 2006-2007 with the above dispositions will be pulled and act as sample for the MATS NRFU study.

Target



Macro is required to conduct 3000 interviews for the MATS NRFU study.

Sample

Macro will pull the sample (as outlined above) that will be used to conduct the interviews. The important thing to know about the sample is that it is limited. We have a certain number of records from which we need to get a target number of completed interviews. It is imperative that you try your best to make every record a complete.

Representing the Entire Population and Respondent Selection

The MATS NRFU study is unique in that we know the SR we are trying to reach in some, but not all cases. As an interviewer you will be faced with two different scenarios: the first in which the SR has already been chosen at baseline (MATS) and the second in which the interviewer (with the help of the computer) conducts a random selection of adults in the household. Details are as follows:

- *For some records, an SR was chosen at baseline, but that SR did not complete. For these records you will know (and your CATI screen will tell you) that you will be asking to reach, for example, the “oldest male” in the household, or “the third oldest female” in the household. This respondent and no other member of the household will be eligible to complete the MATS NRFU survey.*

- For the remaining records, within each eligible household, the interviewer (with the help of the computer) conducts a random selection of adults in the household. This is done to ensure that the people we select are as representative as possible of the entire population. The goal of this selection process is to ensure that the demographics of the people who are surveyed in a given state match the demographics of the population in that state. This includes factors such as age, sex, race, parents of children, adults without children, etc. *Once the SR is chosen, this respondent and no other member of the household will be eligible to complete the MATS NRFU survey.*

Number of Attempts

According to BRFSS CDC protocols that the MATS NRFU adheres to, each record in the sample must receive a terminal disposition or 15 attempts before no more calls are made to the number. The CDC has designated three calling occasions: weekday (9–5), weekday evening (5–9), and weekend. The CDC protocols require that the 15 attempts be allocated to the three different calling occasions (or dayparts). The CDC has designated three calling occasions: weekday (9–5), weekday evening (5–9), and weekend. The CDC protocols require that the 15 attempts be allocated to:

- 3 attempts weekday
- 7 attempts weekday evening, and
- 5 attempts weekend.

These calling protocols minimize bias (such as only calling people available in the evening) and maximize completeness (the effort designed to reach every eligible respondent).

Special Interviewers

There are two types of special interviewers calling for the MATS NRFU . “Comma Four” interviewers call records that have previously received a refusal at baseline, or from respondents who did not refuse at baseline, but have a refusal code after calling on MATS NRFU. Comma Fours will also call records dispositioned as “unable to complete due to impairment,” “no eligible respondent during time period,” and similar dispositions. In addition, the MATS NRFU will be conducted in Spanish with bi-lingual interviewing staff.

Incentives

Respondents who complete the MATS NRFU survey will receive a \$20 check incentive for completing the survey. Language about the incentive is up front at the beginning of the introduction to the survey so that respondents will know of the incentive right away. Incentives are being used to help boost response rates for this study, so be sure to read the introduction verbatim and include the mention of the incentive.

Interviewers will be prompted towards the end of the survey to collect the respondent’s name and mailing address. PM management staff will coordinate mailing out checks on a weekly basis, so it will likely take about 2 weeks from interview completion before a respondent receives his/her check.

Since respondents will receive a check as a thank you for participation it is imperative that name and address are spelled correctly in this part of data collection.

The client will only reimburse Macro for checks that are cashed, so again, it is critical that accurate name and address info is collected so that respondents can easily cash their checks.

The Role of Macro

The Project Managers

The project management team at Macro first writes a proposal, specifying conditions, protocols, and goals for entering into a contract with the client. Once an agreement has been reached on the contract, the project management team, the programmers, and the data collections department work together to prepare for fielding the study. Project managers train data collections staff on survey protocols. Macro's contract with the client specifies that certain protocols will be followed. This is done to ensure reliable data. As the study progresses, project managers monitor data collections reports, and provide clients with monthly status reports. Finally, project managers present a final clean "dataset" report to the MATS NRFU client.

Data Collections

Data collections staff train interviewers and assign interviewers to the study. Data collections staff run reports to track response rates, the number of attempts made on each record, the number of records required to complete the desired number of interviews, and the number of days it took to make the required number of attempts on all records. These reports measure the efficiency, productivity, and thoroughness of the calling room effort, and determine how staff and run the study.

Interviewers

This is where you come in. Conducting the interview is the most important part of the process of collecting the MATS NRFU data. When you conduct each interview professionally, without bias, and record the responses accurately, you ensure that the data Macro produces for its MATS NRFU client is valid and of the highest quality.

Quality Assurance

Data collections staff and project managers review the work of the call-room overall and the work of individual interviewers in regard to accuracy of dispositions, quality of CfMC messages, frequency of "don't know" responses, rates of refusal, and other calling practices. In addition, the Macro contract with the DHMH specifies that the quality assurance department will monitor at least 10% of all calls and will monitor each interviewer at least once a week.

The Data Processing Team

The data processing team reviews the data collected in interviews before sending the data to the DHMH. This review "cleans and edits" the data. An example of "cleaning" is an examination of responses recorded under "specify" or "other" to see if these responses could have been coded as one of the response options that were provided. If not, the response is checked for spelling and sent to the client verbatim. The data processing team also looks for conflicting information or "this doesn't add up." They review dispositions for accuracy, and to see if frequency of dispositions fall within expected ranges. If and when we find "suspicious" responses in the data, we must contact respondents again for verification.

All of these steps are taken to ensure that the work performed at Macro is of the highest quality.

An Overview of the MATS NRFU

The Introduction (2 versions)

- **No SR already chosen**
-> go to the selection process -or-

-> go to a disposition choice or screen

- **SR known**

-> go to a disposition choice or screen

The Survey Questions

The Close and Thank-You

Other aspects of the MATS NRFU that are important to know: (suggestion: use this list as a worksheet when you go on practice. Keep it as a reference for making notes when you have questions).

- Each survey takes about 5 minutes.
- The verification number for the MATS is the call-center number posted at each station. In addition to the general verification number, you can direct respondents to call Robert/Bob Fiedler at the DHMH (410-767-6878).
- The *limited* nature of the sample dictates approaches to interviewing, refusal conversions, handling dispositions, and scheduling callbacks.
- Many (although not all) of the people you are calling had refused to participate in MATS in 2006-2007.
- The first screen to come up (before the introduction screen) presents a call history and the message left by the last interviewer.
- The introduction screen can offer good information on what has occurred on a record in previous calls. Look for: CfMC messages, Selected respondent, Reason for termination, etc.
- Interviewers are responsible for knowing and following all MATS protocols. These include: Reading Verbatim; Respondent Selection; Reselecting a Respondent; Proxy Interviews; Ensuring Respondent Confidentiality; Accuracy: Probing and Clarifying; Dispositions; Scheduling Callbacks; Leaving Messages; and Refusal Conversion.
- Read **100% verbatim** on all questions. The one exception is on the introduction in a refusal situation.
- The respondent selection process requires care and attention.
- Sometimes the only way to deal with a record will be to contact a supervisor.
- There are many different *types* of questions in the MATS NRFU. These types include: scales, tests of knowledge, questions with multiple responses, questions of opinion, factual questions, open-ended questions, questions asking “how many times per day, week, month, year,” and others.
- The screens containing MATS NRFU survey questions also include instructions to interviewers: [READ LIST], [MULTIPLE RESPONSES ALLOWED], etc.
- The MATS NRFU contains *skip patterns* in which the answer to one question influences the structure or choices of the following questions.
- The MATS NRFU contains vocabulary that may be new and must be learned.
- It is possible to suspend and resume on the MATS NRFU. When a suspended survey is resumed, the screen contains specific information for interviewers. The record cannot be suspended again until one question has been answered. It may be necessary to enter “refused” to one question.

Approaches to Interviewing

There are four elements to an interview: the survey questionnaire; the protocols; the respondent; and the interviewer. The questionnaire and the protocols are fixed and unchanging. Respondents are the biggest variable; they represent the whole range of human behavior and experience. Every respondent presents a different degree or kind of challenge. Interviewers can learn to *follow protocols and at the same time handle successfully any challenge* a respondent might present.

Use Your Best Voice and Phone Manner

The first 15 seconds of the introduction can mean success or resistance. “Smile while you dial,” works for some callers. Be focused. Sit up straight in your chair. Talk directly into the mouthpiece. Be courteous and friendly, pleasant, and professional. Maintain an even tone of voice. Speak as clearly as possible. Read the script with good expression, and in a natural, conversational manner. *Listen carefully to the person with whom you are speaking and adjust your volume, pace, and expression accordingly.*

Give the introduction enough time. Don’t rush. You may have said this introduction hundreds of times, but the person with whom you are speaking has never heard it before. If a respondent has to strain to understand what you are saying and why you are calling, what are the chances this person will cooperate? Just “reading the words” is not enough. You must think about *communicating* with the person who is on the phone.

Approach introductions with confidence, and be patient and polite at all times.

Read Every Question Verbatim

Read every question exactly as written as it comes up on your screen. Read every question in full. Do not paraphrase a question based on a previous answer the respondent has given you. Interviewers must read verbatim to *ensure that every survey with every respondent is conducted in the same way.* Data collected in a survey is reliable and valid only if *every question is read verbatim.*

Reading verbatim is the absolute foundation of conducting an interview. Reading verbatim is the *only way to obtain reliable information.* In addition, interviews move along *more smoothly* when interviewers read verbatim. Here is what can happen when interviewers stray from verbatim:

- The interviewer’s voice loses authority and confidence and begins to sound hesitant.
- Respondents get anxious. (“Who are you? Where did you say you were calling from?”)
- The interview *takes longer*, because you have to go back and correct for the inaccuracies or misunderstandings that arose from changing the script.
- The interviewer loses control of the interview.
- The data entered is invalid or skewed.

“I was afraid the guy was going to hang up on me” is *not a valid excuse* for not reading verbatim. There is no valid excuse for not reading verbatim.

Read verbatim. Do not change or abbreviate the wording of any question. No matter what is going on with a respondent in a particular interview, as long as you are conducting the interview, you must read every question verbatim.

Maintain a Professional Approach

The interviewer on the MATS NRFU has a *job* to do. This job makes the matter of speaking on the phone different from a phone conversation with a friend.

In a conversation with a friend, it is “natural” to provide “normal human responses.” But doing this in an interview leads to practices that are unprofessional and unacceptable: commenting on positive information (“That’s good!”), commiserating with a respondent (“That’s so sad!”), sharing your own experience, knowledge, or opinion (“My uncle has that disease.”), apologizing for questions (“This is gross, but I have to ask...”), or helping the respondent to decide on an answer.

You are not a friend or therapist for the respondent. You do not have to “fix things” for the respondent. To the extent that you take on these roles, you are engaging in “off-task” behavior. You may have strong feelings about what a respondent tells you. You may strongly agree or disagree with what the person is saying. But you need to *keep these feelings and opinions to yourself.* It’s not professional to bias the interview with your own feelings and

opinions. And doing so makes the data unscientific and invalid. *Your job* is to obtain reliable, valid, complete, and unbiased information.

You can build rapport with a respondent by maintaining a pleasant voice quality, reading the questions in a natural, conversational manner, reading with expression, and sounding interested.

Remind yourself that as an interviewer on the MATS NRFU, you have a *very important job to do*. Being professional means being prepared, reading verbatim, understanding the survey, building your skills as an interviewer, and giving every call your best effort.

Observation: Some excellent interviewers, who also have very high completion rates, conduct MATS NRFU interviews *without an extra syllable* of commentary, not even “Okay.” They are thoroughly neutral and professional. Respondents do not often hang up on them. Why? These interviewers have excellent clarity, pace, expression, and voice quality. They read every question as if they are *thinking about the question*. They sound as if their whole attention is *focused on the respondent*.

Focus on Respondents and Listen Carefully

Pay close attention to what respondents are saying and how they are saying it. If the respondent seems rushed, pick up the pace a little. Listen for hesitation or pauses that might indicate uncertainty and a time for you to probe or verify. An interviewer’s *tone of voice, attentiveness, and receptive manner* can make the difference between a hang up and a completed interview.

Be Respectful and Sensitive at all Times

Remember that in agreeing to participate in a survey, the respondents are revealing parts of their character and behavior to a total stranger. This alone deserves respect. On the MATS NRFU, some of the questions may be considered personal, and interviewers should be especially alert to respondents’ reactions.

In sensitive or potentially sensitive situations, keep in mind:

- Any question may be sensitive to a particular respondent. For example, a respondent who has just lost health insurance may react emotionally to questions on that topic.
- Listen carefully. Adjust your pace or tone of voice if necessary.
- If the respondent is answering “yes” to sensitive questions, this does not mean that the respondent will soon hang up. Continue to read the questions in an even tone of voice.
- Many respondents who become emotional are adamant that they want to continue the survey. They understand that this is their opportunity to be represented when public policy is being made.
- It is possible to be both neutral and sensitive.

Remain focused and professional when asking sensitive questions or encountering emotional responses.

Make an Effort to Reassure Hesitant Respondents

Interviewers are expected to handle any respondent objections, questions, or complaints smoothly and professionally. Remain polite, respectful, professional, and informative. This is the best way to reassure a respondent who is hesitant and obtain cooperation from a respondent who expresses objections. Answer a respondent’s questions in a *courteous, confident manner*.

If you have a problem answering any particular question, make a note of it. Look up the answer or ask for help. Be ready with an answer the next time.

Stay in Control of the Interview

The interviewer must establish and maintain control of the interview. Here are some situations that can lead to a loss of control:

- The respondent is rushed and “just wants to get this over with.”
 - The respondent is overly chatty and gives a narrative.
 - The respondent is confused or unable to focus.
 - The respondent is argumentative.
 - The respondent is emotional or giving answers that may be sad, depressing, or alarming.
-

When presented with these situations, interviewers are sometimes tempted to abbreviate the script, rush the interview, or engage in off-task conversation, or other practices that compromise gathering valid data. An interviewer who does these things has *lost control of the interview!*

Your task is to read every question verbatim and obtain valid and accurate answers. Be prepared with strategies to maintain control.

Be Prepared to Deal with Problem Situations

Experienced interviewers build up a repertoire of phrases to use in difficult situations that arise during an interview. Here are some suggestions for dealing with difficult situations. Other approaches may also work. Keep track of these in your Notes.

The rushed respondent: “We have only about five minutes (give an honest estimate) left until the end. We can do this quickly if we both focus on the questions.” Or, “It is possible to suspend this interview and complete it at another time. We can arrange a time at your convenience. Would you prefer to do that?”

The chatty respondent: “You are making some good points. We’ll be getting to some of those questions in a little while. If there is anything we haven’t covered by the end of the survey, you can tell me then.” Then re-read the question and the choices provided.

The confused respondent: When the respondent is not able to decide on an answer or does not seem to understand the question, the entire question should be repeated. Repeat the question more slowly, making sure you are speaking directly into the mouthpiece. Repeat the answer choices if necessary. The respondent may not have heard the question fully the first time, or might have missed the question’s emphasis.

The distracted respondent: Re-read the question and the choices. Try to move the survey along, bringing the respondent back to the next question. Offer to suspend if the respondent is distracted by something else going on in the house. (Offering to suspend sometimes helps a person to focus better!) Listen carefully and try to analyze what’s going on. In these situations, you need to use good judgment and deal with the situation accordingly.

The argumentative respondent: Once you get into the survey questions, it is rare to have a respondent become argumentative on this study. You can say, “These are the questions the DHMH considers to be important.” “You can refuse to answer any question you don’t want to answer. Remember, all your answers are confidential.”

The abrupt respondent: If a respondent has answered a question previously and cuts you off, say, “I have to read every question as it comes up on my screen.”

The forward respondent: One way to deal with a respondent who answers the question before you have read the *whole* question is to go ahead and read the whole question every time or say, “I have to read every question in full.” Respondents then get the idea that they will have to listen to the whole question before giving an answer.

The emotional respondent: Above all, maintain focus, and listen. Adjust your pace and tone of voice, if necessary. If the respondent is upset, make a judgment as to whether to offer to suspend. In general, as long as the respondent is able to focus, and can understand and answer the questions, continue the interview.

All of these strategies help interviewers stay in control of the interview. Done smoothly and confidently, with a pleasant voice and manner, these techniques can also help you *to build rapport with the respondent*.

Note: After a difficult interview, take a deep breath and count to five to clear your mind before beginning the next interview. Promise yourself to take extra good care of yourself on the next break.

Maintain Neutrality

The interviewer must make every effort not to influence the respondent's opinions, suggest answers, or lead the respondent to a specific answer. Interviewers should be *nonjudgmental, noncommittal, and objective*. Nothing in the interviewer's words or manner should imply criticism, surprise, approval, or disapproval of either the questions or a respondent's answers. Even a slight gasp or "Okay" can clue a respondent to a reaction. Read the script in an even, neutral tone, and *avoid reacting in any way* to respondent's answers.

Sometimes interviewers feel that they must affirm a respondent's answers in order to keep the respondent's attention and continue the respondent's cooperation. (The respondent says, "I stopped smoking three years ago." The interviewer says, "That's great!") *This is unacceptable and unnecessary, and counter-productive*. Think about this: if you make a comment about stopping smoking, you set up in the mind of the respondent that you are now judging their behavior. Your previous judgment may actually *inhibit the respondent* from giving an honest answer later in the survey.

In conducting an interview, you are giving the respondent something valuable. You are giving the respondent *your full, unbiased attention*. You are *focused on the respondent and listening carefully*. You are giving the respondent an opportunity *to be represented* in an important study.

A neutral approach *helps the respondent to feel comfortable* answering the questions truthfully and completely. The questionnaire is designed to elicit a free flow of ideas and opinions. Respondents *need the freedom* to say what they think and feel *without being influenced* by anything an interviewer might say.

Avoid Leading

The survey questions are written carefully, revised, and then tested. In most instances, it should be sufficient to read the question and obtain an answer on the first try.

If the respondent is having trouble answering the question within the choices given, re-read the question and the answers. It is your job to get the *respondent to commit to an answer*. Use neutral probes, if necessary. You want the answer to *come from the respondent*, and not from anything you have suggested or influenced.

Interviewers who lead respondents often do so because they fear a break-off, they feel the respondent is rushing them, or they feel a lack of confidence in their ability to probe skillfully.

Here are some forms of leading: An interviewer must *never* say these things:

- "So you said you smoke 1-2 packs of cigarettes a week. Is that more like 2?"
- "And no physician has told you that you should quit smoking."
- "I don't suppose you've tried to quit smoking."

All of these examples of leading also demonstrate paraphrasing the script, and not *reading verbatim!*

Make Quality and Accuracy a Priority in all Aspects of Interviewing

While you are conducting an interview, keep in mind the objectives of the MATS NRFU. Remember that this is an important study that has the potential to affect the health of all Maryland residents. Remember that the client is

relying on you and is counting on your best effort on this and every interview. Be prepared; know the survey; use your best voice quality; read verbatim; probe when necessary; record all answers accurately. *Strive to meet productivity standards without sacrificing quality.*

Know the Questionnaire

The interviewer's job is to complete interviews honestly and accurately with respondents who meet the selection criteria. If a particular record cannot be completed on the present call, it is also the interviewer's job to make the best effort possible to enable the next interviewer to get a complete or resolve the record with an appropriate terminal disposition.

Be Prepared

Before you log in and begin calling, have a FAQ sheet at your station. If you are unsure about dispositions, have the list of dispositions ready. Think over the kinds of questions asked by respondents, especially those questions that have given you problems. Think about how you can better answer those questions. Review protocols, mechanics, and any other parts of the survey.

Pay Attention to the Screen for Information and Instructions

The first screen on a record gives the call history and message from the previous caller. The introduction screen indicates whether or not a selection has taken place, the reason (if given) for a termination after the selection process, previous refusals, etc. Scan these screens for any information that indicates how you might approach the introduction, and adapt your introduction accordingly.

On the survey questions, pay close attention to any and all instructions to interviewers. These appear in bold or in brackets on the screen. They include:

[Please read]

[Do not read]

[Multiples allowed] i.e. {mul = 5}

[Read only if necessary]

Prompts that are specific to certain questions

Keystroke instructions

Make Every Introduction Count; Make Every Contact Count

Keep in mind that sample is loaded once, and we have to obtain 3000 completes. This means that attention and care must be given to introductions, refusal conversion, correct dispositions, and messages.

- Think about how you are either going to get a complete on this call, or do your best so that the next caller can get a complete or resolve the record.
- You play a part in avoiding wasted effort. For example: a business phone put back into calling means that another interviewer will call that number again. This wastes time and lowers productivity.

Use the Correct Disposition and Leave Good Messages

Learning and using correct dispositions and leaving good messages for the next interviewer are two of the most important factors in making every contact count, and increasing the chances of getting a complete on the next call. The list of dispositions is in Appendix D. Please keep this sheet at your station and refer to it often. If you are ever unsure how to code a record, see a supervisor. Disposition Protocols and Leaving Messages are also covered in Appendix D of this manual.

Move Smoothly From the Introduction to the First Question

Unless you have encountered resistance or questions, move to the first question without interruption. A pause gives the impression that the interviewer is waiting for approval or disapproval. It also allows the respondent time to

refuse the interview. Asking, “So, do you want to do the survey now?” or “Would you mind answering some questions?” invites a refusal. Move right into the selection process or survey questions.

The Selection Process Requires Care and Attention

Here, it is important to know that you will be asking, “How many adults live in your household?” and then “How many of these adults are men and how many are women?” The computer then selects one adult in the household to be the “selected respondent.” The interview *can then be continued only with the selected respondent* and no other person.

Don’t rush this process. No question can be asked until there is a selected respondent and that selected respondent is on the phone. Listen carefully to be sure that the person with whom you are speaking *understands the questions* in the selection process. Know and follow the protocols for eligible residences and eligible respondents. *Note: college students living away from home should not be included in the selection process.*

Occasionally a respondent will feel hesitant answering these questions about household composition. Reassure this person that the information gathered in the study is confidential. Offer the verification numbers: the general 1-800 number at your station and the DHMH number from the FAQ sheet. Then you can say:

Since we cannot interview everyone, the MATS NRFU is designed to ensure that the people we interview are as representative as possible of the entire population.

A Look at the Questionnaire

Understand the nature and content of the questions. Be prepared to answer any questions that come up in the course of the survey. Be prepared with specific probes on certain questions. Know the length of the survey and be able to estimate the number of minutes left to complete.

As you go through practice, try to anticipate the kinds of challenges posed by different questions. Refer to the MATS NRFU Questionnaire for clarification about the intent of any question in the survey.

Know How to Suspend and Resume

Suspending an interview allows all of the information collected up to that point in the survey to be saved. The interview can be resumed at the next question without having to go back to the beginning. (In the event of a break-off, typing “term” in the middle of an interview erases the information collected to that point.)

To suspend: Type “suspend” at the arrow prompt: → suspend. A screen will appear giving instructions to the interviewer. Below the screen is a space to leave a message for the next interviewer. Leave a very specific message stating why the interview was suspended, whether or when the respondent requested a callback, etc.

11/14 SSPND sf’s baby woke up; req C/B 11/15 6:00PM 999b
06/05 SSPND sm refused on firearms question & HU! 999b
03/20 SSPND ¾ done, in St-added? s; C/B 3/23 10:00AM 999b

On the next screen, an instruction will appear to enter a time to call back. Enter a time.

To resume: The call history screen gives the first indication that a record has previously been suspended. A new line appears saying, “Message typed when interview suspended:” A message from the interviewer who suspended the record appears below that line. While you are still on the intro screen, and before you resume the interview, **be sure that you are speaking with the selected respondent!** After the introduction screen, the next screen to come up could be the first survey question. You might have to ask two questions before arriving at the question that resumes the survey. Ask for patience reading the first few questions again.

If something happens and you must suspend again, you must ask one question or enter “refused” to one question before suspending again. If you just suspend without doing this, the record could result in a “blow case” and all the

information could be lost. This record will have to be started all over again, right from the selection process. The interviewer who has to deal with this situation will have to be very persuasive, apologetic, and patient.

Ask Questions

Ask for help from a supervisor any time you encounter a problem and don't know what to do.

Offer Suggestions to Supervisors or QA Assistants

Interviewers have first-hand, front line experience with the MATS NRFU. Your observations and suggestions are valuable to the project managers and the clients. If you see any problems or have ideas to improve the survey, please document them. Give your suggestions in writing to a supervisor or QA assistant and ask that they pass it along to the project manager.

MATS NRFU Survey Protocols



The following procedures must be followed to ensure that the data collected by Macro is valid and reliable. Macro's contract with the client specifies that these protocols will be followed. It is your responsibility as an interviewer to understand and implement these protocols. The MATS NRFU will follow the **2007** BRFSS protocols, *with the modification of the refusal protocol*:

Records that were dispositioned as refusals for the 2006 MATS will be permitted only one refusal (SR or NSR) disposition in the MATS NRFU survey prior to the record being terminated.

All other dispositions can receive up to two refusals before the record is terminated (including those being handled by the conversion unit). The first refusal (from anyone in the household) will move the record into the refusal study, and a second refusal will be a terminal disposition.

Reading Verbatim

Much work has gone into the writing and testing of the survey questions. Every question should be read to the respondent exactly as written. Methodological studies have shown that even slight wording changes, such as substituting "should" for "could" drastically influence the respondents' perception of what is being asked and their responses to the question.

- The questionnaire should be thought of as a script, and the questions should be *read exactly as they appear*.
 - Questions must be read in the *exact order* in which they appear.
 - Read all questions *in full*. Never accept an answer if you are interrupted and have not read the entire question.
 - Interviewers must ask *every question*. In answering one question, a respondent may sometimes answer another question that appears later. If that happens, the interviewer must *still ask the question*.
-

The questions that appear on the screen are part of the contract agreement between Macro and the client. These are the questions the *client wants interviewers to read*. Macro, in signing the contract, is guaranteeing that interviewers are *reading verbatim*. Quality assurance assistants and supervisors monitor interviewers to verify that interviewers read verbatim.

Respondent Selection

Proper administration of the selection process is extremely important. None of the survey questions can be asked until an eligible respondent has been selected. Give this process enough time and attention. The selection process ensures that we are interviewing all types of people. If this is done correctly, the data gathered is valid. This process has a number of steps.

Eligible phone number: Verify the phone number on the introduction screen. Only residential phone numbers are eligible. Non-eligible numbers include businesses, cell phones, computer and fax lines, pay phones, etc. Non-residential phone numbers should be assigned an appropriate disposition.

Eligible Household: An eligible household is a housing unit that has a separate entrance; where occupants eat separately from other persons on the property; and is occupied by its members as their principal or secondary place of residence. Non-eligible households include the following:

- Vacation homes occupied by household members for *less than 30 days per year*.
- Group homes (sororities and fraternities, halfway houses, shelters, etc.).
- Institutions (nursing homes, college dormitories, etc.).

Selection Process: Interviewers will ask how many adults over 18 are residents of the household. Then they will ask how many of these individuals are male, and how many are female. (In a single adult household, the interviewer will ask, “Are you that person?” and if the adult is a man or a woman, if necessary.) Once the information is entered, the computer randomly selects one person to be interviewed.

Eligible Residents: Eligible household members include all related adults (aged 18 years or older), unrelated adults, roomers, and domestic workers who consider the household their home. Household members do not include adult family members who are living elsewhere.

As you go through the selection process, remember the following:

- Everyone 18 or older should be counted among the adults living in the household. High school students who are 18 years old or older should be included, as should adult children living at home. **College students who are living away from home should not be included.**
- When you are asked to confirm the number of men and women in the household, be sure to read this back to the respondent and get confirmation that this is correct.

Verifying the selected respondent: In order to proceed into the survey, the *selected respondent, and no other person*, must be on the phone. If at any time you begin to question whether you have the correct respondent on the phone, verify with whom you are speaking. Another opportunity for verification is at the gender question towards the beginning of the survey. If the gender of the selected respondent is different than the gender of the person with whom you are speaking, there has been an error in the selection process or you do not have the correct person on the phone. In that situation, you have to ask the correct person to come to the phone, and then back up and repeat questions with that person. You may have to end the call and put in a callback to reach the correct person at another time. Both of these are better options than completing the interview with the wrong person.

Rectifying errors in the selection process: Once a respondent has been selected, the interviewer cannot re-select a respondent. If you feel that the selection process was invalid for any reason, write down the master ID number and stay on the screen and contact a supervisor. Explain the reason you are concerned. The supervisor will confirm that the selected respondent is correct or will enter a code to change the selected respondent.

Reselecting a Respondent

Occasionally something goes wrong in the selection process: the residence is confirmed as eligible, but there is no person fitting the description of the selected respondent; the selected respondent has moved out (or is now deceased); or the selected respondent is actually at the residence so infrequently as to be a non-resident (i.e. stays with friends, picks up the mail at the house). The interviewer should follow these steps:

- Verify that the selected respondent does not live there.

- Explain the situation to the resident with whom you are speaking.
 - Contact a supervisor to enter a code to re-select a respondent.
 - After the code is entered, the question "Is this a private residence?" comes up on the screen.
 - Go through the selection process with the respondent, and complete the interview or schedule a callback.
-

If the respondent is no longer on the phone, schedule a callback, using a 104 or 105 disposition.

Unique Situations in the Household Selection Process:

Interviewers must make a determination as to whether the telephone number reaches a household, and determine the correct disposition. This becomes especially important when summer approaches and we reach people at timeshares and summer homes.

What are the criteria for a private residence?

- The person answering the phone does NOT say that the number is a business, institution, group home, pager, fax machine, cell phone, or modem.

What is the proper disposition for a cell phone?

- Code cell phone numbers as "007-Non-residential, Cellular, Phone Booth"

What is the proper disposition for dedicated faxes and modems?

- Code faxes and modems identified as such on the first call attempt as "018-Fax machine"

What if the number is both a phone and a fax?

- If the first call placed is something other than a fax and the next call is a fax, the number may not be a dedicated fax line. Code any fax as "018 Fax machine" and continue to call. The system will put the record back into calling a specified number of times to cover the possibility that the number is used for both phone and fax. If a specified number of consecutive additional calls are faxes and there is no evidence the number rings into a residence, the number may be assigned a final disposition of "018 Fax machine."

What is EFAX and how should it be coded?

- EFAX is a service that permits voice messages and faxes to be sent to an e-mail account. When a number is called, a message identifies this number as an "EFAX subscriber." These numbers will never ring into a residence and should receive a final code of "Not a private residence."

If a respondent states they reside at this number for less than 30 days a year, should the interview continue?

- The interview should be terminated and coded as "Not a private residence." If the respondents state they live at the residence 30 days or more, then continue the interview.

How are timeshares handled?

- If the respondent indicates the residence reached is a timeshare, and they do not live there for 30 or more days a year, code as "Not a private residence."
-

Proxy Interviews

A proxy interview is one in which one person answers for another. **Proxy interviews can never be conducted on the MATS NRFU.** There are some reasons for this. First, the proxy may not have the correct information. Second, many questions are personal, and the respondent may not be willing to give honest answers to the proxy.

If the person on the phone says that the selected respondent cannot hear well enough to do the interview or is too ill to come to the phone, make an attempt to speak to the selected respondent to determine for yourself whether or not the interview can be conducted with that person. If it is not possible, the record should be given an appropriate disposition such as “unable to complete due to impairment” or “language barrier.”

Ensuring Respondent Confidentiality

The MATS NRFU contains sensitive questions and information. It is natural and understandable that respondents will question where the data is going and how it will be used. When a respondent asks questions about confidentiality, be prepared with an explanation. Take enough time; don’t rush the explanation. Use the FAQ sheet. Mention these points:

- No information that can identify you is ever used in a MATS NRFU report.
- The data is only reported in aggregate or group form.
- Any identifying information, such as a telephone number or an initial, is separated from your responses once the data has been collected and compiled. The computer separates the identifying information data from the final report.
- As an interviewer, I have signed a confidentiality agreement as a condition of employment, and I am not allowed to discuss this study or any study with anyone outside the call-room and outside of work-related conversations.

Accuracy: Probing and Clarifying

Probing and clarifying, or using words to obtain more information or more precise information, is one of the most challenging and important aspects of interviewing. Probes are used when an answer is inadequate and requires the interviewer to seek more information. Probes are also used when a respondent is unsure of an answer and is having trouble making a choice.

Here are some general ideas about probing and clarifying to keep in mind:

- Effective probing requires that the interviewer understand a question’s rationale. Different questions ask for different kinds of information. Learn the intent of the question. Different kinds of questions require different kinds of probes or clarifying techniques.
- Use neutral questions or statements to clarify a response or elaborate on an inadequate response:

Can you explain that?

I can only enter one answer. Which would you like me to record?

What does the question mean to you?

Which choice would you like me to use?

What would be your best estimate of the average number of times?

So, in terms of “how many days,” what would be your best estimate?

Would you like me to enter “yes” or “no” for that?

So, on a scale of “excellent, very good, good, fair, or poor, what would you like me to put?”

- Some questions ask for multiple responses. Ask “Anything else” until the respondent says, “no,” or until you have entered the number of answers allowed.
- When the respondent is unable to decide on an answer, does not understand the question, or misinterprets the question, the entire question and the choices should be repeated.

- The silent probe is also useful. Pausing or hesitating indicates that more or better information is needed.
- Respondents often dodge a question with “I don’t know.” An initial “I don’t know” should be probed. Sometimes the respondent just needs a little time to think over the answer. If the respondent really does not know the answer, record “Don’t know.” (Occasionally “Don’t know” is a legitimate choice, as in a question of knowledge. In this instance, no probe is needed.)
- The best verbal probes are deft: skillful and quick. This can be learned with practice. You want to be able to probe and still keep the interview moving right along.
- It is especially important to probe on questions that are part of a skip pattern. Future questions depend on the answer to these questions.
- You can verify that you have recorded the correct answer by repeating the answer back to the respondent.

Dealing with Refusals---two ways

MATS NRFU ATS special protocol specifies persons who had a disposition of “refuse” in the MATS study who initially refuse to be interviewed for MATS NRFU will NOT be contacted again (note the refusal can come from the SR or a Non-SR).



However, records that did not have a refusal disposition as in MATS, but give soft refusal on MATS NRFU *will* be contacted one additional time to give them the opportunity to complete the interview. It is best for this contact to be made by a supervisor or a different interviewer. Please note, one of the major differences between the MATS NRFU and the BRFSS is that we are not differentiating between selected and non-selected respondent refusals. The first refusal from any member of the household (160-initial refusal) will move the record to the refusal study, and the second refusal (002- Hard Refusal), from any member of the household, will be considered a final refusal and the record will not be called on again.

Here are a few things to keep in mind about refusals and your approach to them:

- Respondents are sometimes rude and hostile for reasons that have nothing to do with your skill as an interviewer or you as a person. Don’t take these reactions personally.
- Rather than reacting to a respondent’s anger or resistance, remain calm and listen. Use what you are hearing to address the respondent’s objection.
- Refusal conversion skills get better with practice. Make the effort at refusal conversion every time you encounter resistance.
- Listen to other interviewers who are successful at refusal conversion. Notice what they do. For one thing, often their voices become even more pleasant, conversational, and gentle. For another, they don’t say the same line every time. They adapt their approach to the particular respondent.
- Do not be afraid to be politely assertive with hesitant respondents; use all of your powers of persuasion to get the interview. Now is better than later. Research has shown that the highest completion rates occur at the initial contact and decline with each successive call. Unless it is clearly a bad time, the interviewer should always try to gently persuade the respondent to do the interview at that time.
- Project a confident and reassuring manner while conveying a genuine interest in the respondent. For example, if the respondent is in the middle of cooking dinner, apologize for calling at an inconvenient time, and offer to call back later. This will convey the interviewer’s willingness to accommodate the respondent and an understanding of the importance of the respondent’s time.
- It is very important to document the reason for the initial refusal because this information may help convert a refused interview into a completed interview on a later call.
- Use the information in the message field (from the initial refusal) to prepare specific responses and approaches on the present call.

- Distinguish between a refusal and an appointment. “I don’t have time to talk right now,” may indeed mean that the person is busy. In this case, try to set an appointment for a callback time.
 - If a respondent seems willing to participate, but is concerned about the survey’s legitimacy, explain the purpose of the survey. Offer the supervisor 1-800 number at your call station. You can also offer the contact person and phone number at the DHMH.
-

Dealing with Specific Refusal Situations: If you see this CfMC message “06/23 sel fem ref x1 not interested 999B,” (or similar message) try some of these approaches:

- I realize we have called you already on behalf of the DHMH. I’d like to have a chance to give you a little more information about this study and why we’re doing it.
 - The results of the MATS NRFU are used by lawmakers, and researchers, and health care professionals.
 - Your input is important so that policymakers and the health care community can make better decisions in planning health programs.
 - We cannot replace you with anybody else. We have a limited number of households that we can contact. When someone does not participate, this makes the results less representative. This is your chance to be represented in policy-making decisions.
 - We want to give everyone who was selected a chance to participate.
 - As we all know, resources are limited. The information collected in this survey helps determine funding levels and public policy for health programs nationwide. One of the purposes of this study is to assess where the needs are greatest.
 - Nothing is ever reported in any way that can identify you. The company I work for, Macro International, is very strict about guarding confidentiality. The computer drops all information that can identify you from the report. Results are only reported in group form.
 - This is not a political group or business. Nobody will try to sell you anything as a result of your participation.
 - Most people find the survey interesting. We could begin, and if you don’t have time to finish it now, we can call later at your convenience.
-

Handling a contact when you need to interview a selected respondent

- {Read the introduction again and explain.} We are conducting a study in which we need an equal number of men and women to participate. It is important that we speak to your husband or wife. I will be asking some questions about tobacco use. This information is important to improve programs of the DHMH.
- Don’t accept the following: “He wouldn’t be interested in that,” or “He hates telephone surveys.” Explain that it is very important to speak directly with the person who is selected for the study. Sometimes the spouse can become an ally in enlisting the cooperation of the selected respondent. Encourage him or her to explain the purpose of the study and the importance of participating. Try to make an appointment for a more convenient time. If the selected respondent comes to the phone, read the introduction and ask the first question.

How did you get my phone number? It’s unlisted.

- The computer dials telephone numbers at random. The computer has the area codes and prefixes for the areas covered by the study. The computer then dials the last four digits at random. We get all kinds of numbers: fire stations, real estate offices, pay phones, etc. The computer can dial an unlisted number as a matter of pure chance. The study is confidential, and nothing can ever be traced back to you.
-

I don’t know anything about that.

- This isn't a test. We only want to ask about health and health practices that affect your health. Many people find the survey to be interesting.

Why should I participate?

- This data will be used to improve health programs and prevent diseases. Participating is one way for you to be represented at the state and federal level. The information is used for planning purposes at all levels of government to develop more effective health programs.
 - For one thing, this has to do with how lawmakers spend taxpayer dollars, and putting resources into programs that benefit the most people and do the most good.
 - The more people we have participating (the higher the response rate), the more accurate the results will be. When you don't participate, it leaves a "hole" in the data.
-

Why do you need to know how many adults live in the household?

- Our survey protocols require that we select one adult from your household. We ask for the number of men and the number of women, and then the computer randomly selects one person. That way we can be sure that the study represents all adults in your state: men, women, young, old, healthy, not healthy, etc.
-

I don't do surveys over the phone. /Put it in the mail.

- We can only conduct this survey over the phone. After years of experience conducting these surveys, the DHMH believes that this is the most efficient, representative, and thorough method of gathering this information. Many people like yourself have participated in this survey, and many find it interesting. You can refuse to answer specific questions.
-

I don't have anything to do with public programs. I get my health care from my private doctor/ HMO/ military.

- All health care providers, public or private, can use the information to improve services, give better advice, and plan better programs.
-

I just moved to this state; I don't qualify as a resident yet.

- If you are now living in this state and you plan to live here, the DHMH considers you a resident.

Refusal Basics

1. Be prepared. Have refusal statements at hand.
 2. Remain calm and listen carefully.
 3. Look for openings.
 4. Acknowledge the concern: "I understand. Let me explain..."
 5. Answer the specific concern.
 6. Remember, as long as *someone is on the line*, you have not lost the interview. Keep talking!
 7. Listen carefully for a respondent's consent. Once the respondent has agreed to continue, stop the refusal conversion, and ask the first or next question.
 8. At the completion of the interview, be sure to show genuine and sufficient appreciation for this respondent's participation.
-

Refused Interview: The percentage of refusals of total numbers called in a given interviewing period is an indicator of both interviewer performance and degree of potential bias in the survey data.⁵

⁵ 1999 BRFSS Quality Control Report, CDC

Introduction and Selection Questions

INTRO 1: NO RESPONDENT PREVIOUSLY SELECTED

Hello, I'm _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I'd like to ask some questions about use of tobacco products. The interview will take less than 5 minutes, and the person who is randomly selected will receive \$20 compensation for their time completing the survey. The information will be used to guide state and county health policies.

Is this _____ telephone number _____?

NO Thank you very much, but I seem to have dialed the wrong number. It's possible that your number may be called at a later time. STOP
YES=Continue

Is this a private residence?

NO Thank you very much, but we are only interviewing private residences. STOP
YES=Continue

We need to randomly select one adult who lives in your household to be interviewed. In order to make this random selection, can you please tell me how many members of your household, including yourself, are 18 years of age or older?

_____ # of adults [Range 1-18; confirm if > 5]

If 1 Are you the adult?

If "yes" Then you are the person I need to speak with.
GO TO SECTION 1

If "no" May I speak with him or her?
GO TO "CORRECT RESPONDENT"

If >1 How many of these adults are men? [Confirm if >5]

0. None
1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven
8. Eight
9. Nine

How many of these adults are women? [Confirm if >5]

0. None
1. One

2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven
8. Eight
9. Nine

The person in your household that I need to speak with is _____.

If “you” Go to Section 1

“Correct respondent”: Hello, I’m _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I’d like to ask some questions about use of tobacco products. The interview will take less than 5 minutes, and you will receive \$20 to compensate you for your time completing the survey. The information will be used to guide state and county health policies.

INTRO 2: RESPONDENT PREVIOUSLY SELECTED

Hello, I’m _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I’d like to ask [INSERT SELECTED RESP. DESCRIPTION] some questions about use of tobacco products. The interview will take less than 5 minutes, and you will receive \$20 to compensate you for your time completing the survey. The information will be used to guide state and county health policies.

Are you [INSERT SELECTED RESP. DESCRIPTION]?

If YES:

Was this your phone number a year ago?

1. Yes
2. No
7. Don’t Know
9. Refused

[Skip to informed consent]

If NO, ask: Is [INSERT SELECTED RESP. DESCRIPTION] available?

If NO: Schedule callback

If YES, and transfers to the correct respondent:

Hello, I’m _____ calling for the Maryland Department of Health and Mental Hygiene. Your phone number has been chosen randomly, and I’d like to ask some questions about use of tobacco products. The interview will take less than 5 minutes, and you will receive \$20 to compensate you for your time completing the survey. The information will be used to guide state and county health policies. Are you [INSERT SELECTED RESP. DESCRIPTION]?

Was this your phone number a year ago?

1. Yes
2. No

- 7. Don't Know
- 9. Refused

INFORMED CONSENT

ALL RESPONDENTS

The interview should take no more than 5 minutes, and may take much less. As a token of appreciation, we would like to offer you \$20 for completing the survey. Later, I'll take your name and address information for the purposes of mailing a money order to you. This survey is completely voluntary and your answers to questions are confidential. Your name and address information will be kept separate from and will never be connected to your survey data. You can end the interview at any time, or if we get to a question you don't want to answer, we can skip over it. If you have any questions about this survey, I will provide a telephone number for you to call to get more information. [Robert Fiedler - 410-767-6878]

This call may be monitored for quality control purposes.

Glossary

Accurate information: Conforming exactly to fact; errorless.

CATI Computerized Assisted Telephone Interviewing.

CfMC The software ORC Macro uses; Computers for Marketing Corporation.

Client: The party for which professional services are rendered. The party who pays for this service.

Contract: An agreement between two or more parties, especially one that is written and enforceable by law. The contract defines what will be done, and who will do it.

Data: Factual information, especially information organized for analysis or used to reason or make decisions.

Dataset: An organized group of pieces of related information. In social science and market research, datasets consist of coded responses to questionnaires. For example, a question regarding gender may be coded 1 for male and 2 for female as opposed to saving the entire word as the piece of datum. This allows the data collected to be analyzed by statistical software such as SAS. Statistical functions may be run and the information can be formatted in to be accessible to the user and ultimately the client.

Demographics: The characteristics of human populations and population segments, especially when used to identify consumer markets.

Disposition: A numerical code associated with each attempt made on a record (e.g. 101 – no answer). The Disposition Code represents the outcome of the call as a numerical value.

Fielding: The process of collecting data using the survey instrument. The fielding “period” represents the start and end date of data collection.

Methodology: 1. A body of practices, procedures, and rules used by those who work in a discipline or engage in an inquiry; a set of working methods: the methodology of genetic studies; a poll marred by faulty methodology. 2. The study or theoretical analysis of such working methods.

Loading: The addition of more sample, in this case telephone numbers, to the CATI system. Also, the process of initializing a study on the CATI system.

Objective: 1. Uninfluenced by emotions or personal prejudices: an objective critic. 2. Based on observable phenomena; presented factually: an objective appraisal. 3. Something worked toward or striven for; a goal.

Probability: *Statistics.* A number expressing the likelihood that a specific event will occur, expressed as the ratio of the number of actual occurrences to the number of possible occurrences.

Productivity: 1. The quality of being productive. 2. *Economics.* The rate at which goods or services are produced especially output per unit of labor.

Protocols: Rules determining the format and transmission of data.

Reliable data: Yielding the same or compatible results in different clinical experiments or statistical trials.

Representative: One who, or that which, represents (anything); that which exhibits a likeness or similitude.

Sample: *Statistics.* A set of elements drawn from and analyzed to estimate the characteristics of a population. Also called **sampling**. In the case of MATS, sample consists of telephone numbers.

Skip pattern: An automated function of CATI interviewing that sequences the questions depending on respondent answers. Skip patterns are often modeled in such a way as to avoid asking respondents to provide irrelevant information. For example, in THE MATS, the skip pattern ensures that female respondents are not asked the prostate questions.

Terminal disposition: Terminal dispositions have a numerical value of less than 100 and greater than 0. (e.g. 001 – complete; 002 – hard refusal; 005 – non working number; etc.) Terminal dispositions will remove the telephone number from active calling. The telephone number will not be called by the CATI system again and it will not be accessible to the interviewer through the manual retrieval of records.

Valid: Producing the desired results; efficacious: valid methods. In the case of a survey, the response to a given question answers the intent of that question.

Logic. a. Containing premises from which the conclusion may logically be derived: a valid argument. b. Correctly inferred or deduced from a premise: a valid conclusion.

Verbatim: Using exactly the same words; corresponding word for word: *a verbatim report of the conversation.*

Pronunciations



Hygiene

hahy-jeen (or hi-jeen)

Appendix A

In-Language Interviewing



If someone in the household says, “No English,” ask what language is spoken in the household. Say, “We’ll have an interviewer who speaks (language) call you back.” If the language spoken is Spanish, code the record as “Definite Spanish”. If you are unsure of which language is spoken, code the record as “Language Barrier”. A Spanish-speaking interviewer will recontact households assigned to either of these dispositions.

Appendix B

Comma Four Special Interviewers



The computer automatically assigns records given certain dispositions to type 4 interviewers.

Records with these dispositions are sent to a Comma Four interviewers are:

- Ineligible residence
 - Selected respondent unavailable during time period
 - No eligible respondent at residence or phone number
 - Selected respondent unable to complete due to impairment
 - Language barrier
 - Refusal: abusive language, threatens lawsuit
 - Refusal: record received specified number of refusals
-

Interviewers who are assigned as “Comma Four” are chosen for their excellent interviewing skills, their excellent refusal conversion skills, and their level of effort and determination in getting completes.

The job of the Comma Four interviewer is of two kinds.

Ineligible dispositions: If the record has received an “ineligible” disposition (the first group above), your job is to verify that the disposition given to the record is correct. (Occasionally these dispositions are used incorrectly.) Probe as necessary; schedule callbacks, if necessary. If it is possible, try to get a complete with the selected respondent on these records. If getting a complete is not possible, assign the correct terminal disposition.

Refusal Conversions: These are records that have received an initial refusal and/or HU’s. The records should show an appropriate call history and message. You should have some idea about who refused and why. Your job is to make a final effort to get a complete on these records.

Why are we calling these records again?

- It’s possible that previous interviewers were less skilled or motivated in attempting refusal conversions. We’re giving our best interviewers a chance to persuade the respondents to participate.
 - The rate of refusal is a measure of both interviewer performance and the degree of potential *bias* in the survey. A lower refusal rate increases the *reliability* of the data. A lower refusal rate is an indicator that the participants are *representative* of the entire population.
 - Finally, studies have shown that the characteristics of people interviewed in the first third of the fielding period differ markedly from those people interviewed in the final third. In other words, by failing to enlist the cooperation of these respondents, the data is potentially skewed in certain ways. (This point is something to keep in mind to motivate you; this is not something you would mention to a respondent.)
-

Is it possible to get a complete when a record has been refused? Yes, absolutely. Try these approaches:

- You can ask, “Has anyone explained to you what this study is about?” It is possible that in the previous call, no one has done this.
- Sell yourself on the study. Use the information in this guide, or even on the website, to explain in your own words why participating in the study is important.
- Listen attentively to what the person is saying, and try to pick up cues from the voice.
- Apologize. “I am very sorry if any previous caller was rude to you (or gave you incorrect information, etc.).
- “I’d like to get started and see how far we get. You can refuse to answer any specific question you don’t want to answer.”
- If it works for you, approach refusal conversion as a challenge and a game. This is the approach of many interviewers who are excellent at dealing with refusals.
- Stay on your toes. Listen hard. Think fast.
- Share what you learn with other interviewers.
- Supervisors: If a person calls the 1-800 line on order to say they are refusing, it is possible for you to convert this refusal into a complete. Give this your best effort.

Appendix C

Client Contact Information		
DHMH	Bob (Robert) Fiedler	410-767-6878

Appendix D

Dispositions



Coding the disposition properly at every attempt is crucial to the quality of the data we collect. The following chart shows each disposition with a description of when it should be used.

2	Def. refusal-NS-HANG UP BEFORE INTRO	78	DIALER - Fax/Modem	122	Fax machine
3	Language barrier	81	Prescreened as Nonworking/Business/etc	129	Move to refusal study (Suprvsr Approved)
5	Nonworking number (caller disposed)	82	DIALER - Nonworking Number	131	Ans machine (Residence Not Confirmed)
6	Business phone	87	Corrupted Phone Record	132	Priv manager (Residence Not Confirmed)
7	Non-residential/Phone booth	94	Dialed maximum attempts	156	Hang up - NS - before intro
8	Cellular Phone	101	No answer	157	DIALER - Fast Busy
13	No Adults 18 or Over in Household	102	Busy Line	160	Selected resp refusal
14	Number changed	103	Busy Line	161	Non-selected resp ref.
15	Physical/Mental impairment	104	Scheduled call back	164	Refused to xfer to selected 2x
16	Ineligible residence (Dorm, Barrack)	105	System scheduled call back	170	Resp. refuses xfer to selected 1x
17	No eligible resp. during time period	106	DIALER hung up	171	Selected person not available
18	Fax	110	Answering machine (Confirms Residence)	172	Selected person not avail. time period
20	Def. refusal-NS-HANG UP AFTER INTRO	111	Ineligible residence (Dorm, Barracks)	173	Selected person unable - lang. barrier
21	Wrong number	112	No eligible resp. during time period	175	Selected person refuses-BEFORE INTRO
22	Not a household	113	Unable to complete - language	176	Selected person refuses-AFTER INTRO
25	Def. refusal-NS-Refuses to xfer to Sel	114	Physical/Mental impairment	178	Temporarily out of service
26	Def. refusal-Selected ref.BEFORE INTRO	115	No Eligible respondent	179	Suspended (CB/BO)
28	Def. refusal-Selected ref.AFTER INTRO	116	Definite Spanish	182	Busy Line
61	Complete	117	Privacy manager (Confirms Residence)	183	No answer
73	DIALER - Unknown Number	118	Call Block	185	No answer
75	DIALER - Nonworking Number	120	Answer machine for leaving message	212	Number Was Put Back on Stack
76	DIALER - Call not completed	121	Non-residential, Cellular, Phone booth		

Scheduling Callbacks

Properly scheduling callbacks is essential to maximizing the response rate, achieving target completes, and meeting the MATS NRFU protocol. For these reasons, guidelines have been established for scheduling callbacks:

- **On fresh records (records that have no attempts), use a 105 (system scheduled callback). This allows all records in the fresh sample to receive one attempt. However, if someone offers a specific time to reach an adult member of the household, use a 104 (scheduled callback).**

- **Callbacks should never be set for more than five days. If callbacks are set too far in the future, it is not possible to meet the protocol that every record be given 15 attempts.**

- **If the record has gone through the selection process, use a 104 only if someone offers a specific time to reach the selected respondent.**

- **If the selected respondent is unavailable (recovering from surgery, on a vacation, studying for exams, etc.), ask a supervisor to authorize a different callback schedule if the callback is to be more than five days.**

- **If there is no selected respondent, your goal is to schedule a callback to reach someone who is able to go through the selection process.**

- **If a respondent has been selected, your goal is to find out when that person is available, and schedule the call for the time most likely to reach that person.**

- **Use a 104 when you have specific information on when to reach the respondent, or when you are setting an appointment. Use 105 when there is no specific information on when the respondent can be reached.**

- **Always leave a message with any kind of callback!**

Leaving Messages

Always leave a message in the system when the computer prompts you for one!

On Scheduled Callbacks, think about the information that will be useful for the next caller. All information pertinent to the call should be contained in your message:

- Specifics on the person with whom you spoke: baby-sitter, elderly male, child, etc.
 - If the person was busy, going out the door, on another call, and your assessment of the situation.
 - The person's request for a specific callback time.
-

Remember that the system can only display the *last message entered*. Your message erases any previous messages. It is important to include relevant information from the previous call in your message.

Very Important: Your messages should always be professional in language and content! Never use slang, profanity, or insulting remarks.

Ask a supervisor for the sheet of common messages and abbreviations. Learn this material or have the sheet at your station. Use the standard abbreviations in your messages. A message should follow this format:

Date contact remarks Caller ID#

Message Abbreviations

<i>SM</i>	<i>Selected Male</i>
<i>SF</i>	<i>Selected Female</i>
<i>NA</i>	<i>Not Available</i>
<i>CB</i>	<i>Call back</i>
<i>REF</i>	<i>Refusal</i>
<i>H/U</i>	<i>Hung-up</i>
<i>RES</i>	<i>Resident</i>
<i>EVE</i>	<i>Evening</i>
<i>MORN</i>	<i>Morning</i>
<i>AFT</i>	<i>Afternoon</i>
<i>REQ</i>	<i>Requested</i>
<i>X</i>	<i>Times</i>
<i>PAR</i>	<i>Parents</i>
<i>SD</i>	<i>Said</i>
<i>SSPND</i>	<i>Suspend</i>

Use these standard abbreviations in messages. Use this format: the **date** and the **message content** and **your id #**.

Please remember that your new message erases previous messages. You must always retype important information from the previous message. After typing the old message, enter the new message with **the date** and your **id #** without brackets. Below are some examples:

Examples of Messages for Call Backs:

- 1/13 CFNS SD CB FOR SM 1/15 EVE 644S
- 5/26 SM REQ CB 6:00 5/29 999W
- 3/25 SF busy now, REQ CB 7:00 EST 999B

Examples of Messages for Refusals:

- 1/15 SF REF X2, not interested 1/15 101S
- 9/15 CMNS Refused 3X, send in mail 999B
- 8/05 SF very angry, REF 3X 999b

APPENDIX E: RESPONSE RATE FORMULAS

All response rates in this appendix are calculated based on the numbers in the table below.

Disposition	Count
110: Complete	
120: Partial Complete	
210: Midterminate	
220: Refused after selection	
230: Selected but postponed	
240: Selected unavail in time period	
250: Selected has Lang Barrier	
260: Selected has Impairment	
270: Refused, indefinite #men/women	
280: Postponed, indefinite #men/women	
305: Household unavail in time period	
310: Refused, indefinite #adults	
315: Postponed, indefinite #adults	
320: Lang Barrier before selection	
325: Impairment before selection	
330: Refused, indefinite priv res	
332: Postponed, indefinite priv res	
335: Ans machine, definite priv res	
340: Block device definite priv res	
345: Ans machine, indefinite priv res	
350: Block device, indefinite priv res	
355: Maybe priv res but now Nonworking	
360: No answer	

Disposition	Count
365: Busy	
405: Reached wrong geographic location	
410: No adults, or teen/child line	
420: Not private residence	
430: Dedicated fax/data/modem line	
435: Cellular phone	
450: Nonworking	

BRFSS CASRO Response Rate Formula

Completes = Completed or Partially Completed Interviews

$$\text{Completes} = (110+120+(210*.32))$$

Eligible=All respondents with known eligibility status categorized as eligible

$$\text{Eligible} = (110+120+210+220+230+240+250+260+270+280)$$

Ineligible= All respondents with known eligibility status categorized as ineligible

$$\text{Ineligible}=(405+410+420+430+440+450)$$

Unknown=All respondents with unknown eligibility status

$$\text{Unknown}=(305+310+315+320+325+330+332+335+340+345+350+355+360+365+370)$$

UNKNDNOM=Unknown respondents added to the denominator

$$\text{UNKNDNOM} = (\text{Eligible}/(\text{Eligible} + \text{Ineligible})) * \text{Unknown}$$

$$\text{CASRO} = (\text{Completes} / (\text{Eligible} + \text{UNKNDNOM}))=32.96\%$$

BRFSS Overall Response Rate Formula

Completes = Completed or Partially Completed Interviews

$$\text{Completes} = (110+120+(210*.32))$$

$$\text{Break-offs and Refusals} = ((210*.68)+220)$$

$$\text{Known Households} = (230+240+250+260+270+280+305+310+315+335)$$

$$\text{Ineligible Households} = 410$$

$$\text{All Likely Households}=(345+350+320+325+330+332+340+370+355)$$

$$\text{Households} = (\text{Known Households}+\text{Ineligible Households}+\text{Completes}+\text{Break-offs and Refusals}+(\text{.90}*\text{All Likely Households}))$$

$$\text{Eligible Households} = (.98*\text{Households})$$

$$\text{Overall Response Rate} = (\text{Completes}/\text{Eligible Households})=18.99\%$$

BRFSS Cooperation Rate Formula

Completes = Completed or Partially Completed Interviews

$$\text{Completes} = (110+120+(210*.32))$$

$$\text{Break-offs and Refusals} = ((210*.68)+220)$$

$$\text{Cooperation Rate} = (\text{Completes}/(\text{Completes}+\text{Break-offs and Refusals}+250+260))=58.38\%$$

APPENDIX F: PRE-NOTIFICATION LETTERS & POSTCARDS



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

December 28, 2007

Dear 2nd Oldest Female:

In the next few weeks you will be called to complete a telephone survey about your use of tobacco products. The interview takes about 5 minutes, and you will receive \$20 for your participation. This survey is being conducted by the Maryland Department of Health and Mental Hygiene. Survey results will be used to guide state and county health policies.

Macro International, a health research company, will call you. They will identify themselves as calling for the Maryland Department of Health and Mental Hygiene. If the call comes at a busy time, please tell the interviewer a better time to call back.

Your telephone number was selected at random by a computer. We ask you to take part in this important survey when you are called. Taking part in the survey, or answering any of the questions, is voluntary and all information is confidential

We value your participation and appreciate your time. Thank you for taking part in this important public health activity.

You may also call 1-800-795-1970 to complete the survey at a time which is convenient for you.

Please call me at 410-767-6878 or email me at rfiedler@dnhm.state.md.us if you have any questions, or want more information.

Sincerely,

Robert Fiedler

Robert Fiedler
Coordinator, Surveillance & Policy Analysis
Center for Health Promotion
Maryland Department of Health & Mental Hygiene

Toll Free 1-877-4MD-DHMH • TTY for Disabled - Maryland Relay Service 1-800-735-2258

Web Site: www.dnhm.state.md.us

Maryland Department of Health and Mental Hygiene

201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

December 28, 2007

Estimado La segunda mujer mayor:

En las próximas semanas se lo llamará para completar una encuesta telefónica sobre su uso de productos de tabaco. El entrevista dura unos 5 minutos, y usted recibirá \$20 por su participación. Esta encuesta está conducida por el Departamento de Salud e Higiene Mental de Maryland. Los resultados de la encuesta se utilizarán para guiar políticas de salud del estado y del condado.

Macro International, una compañía de investigación de salud, llamará a los hogares. Se identificarán ellos mismos como llamando para el Departamento de Salud e Higiene Mental de Maryland. El entrevistador seleccionará sólo un adulto en su hogar para responder las preguntas. Si la llamada se realiza en un momento en que usted está ocupado, por favor indíquele al entrevistador un horario mejor para volver a llamar.

Su número de teléfono fue seleccionado al azar por una computadora. Le pedimos que tome parte de esta importante encuesta cuando lo llamamos. Tomar parte de esta encuesta, o responder cualquiera de las preguntas, es voluntario y la información es confidencial.

Valoramos su participación y apreciamos su tiempo. Gracias por tomar parte de esta importante actividad de salud pública.

Por favor llámeme al 410-767-6878 o por email a rfiedler@dhhm.state.md.us si tiene alguna pregunta, o si quiere más información.

También podrá llamar al 1-800-795-1970 para completar la encuesta a una hora conveniente para usted.

Atentamente,

Robert Fiedler

Robert Fiedler
Coordinator, Surveillance & Policy Analysis
Center for Health Promotion
Maryland Department of Health & Mental Hygiene

Toll Free 1-877-4MD-DHMH • TTY for Disabled - Maryland Relay Service 1-800-735-2258

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STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

December 28, 2007

Dear Maryland Resident:

In the next few weeks an adult member of your household will be asked to complete a telephone survey about their use of tobacco products. The interviewer will select only one adult in your household to answer questions. The interview takes about 5 minutes, and the person interviewed will receive their participation. This survey is being conducted by the Maryland Department of Health and Mental Hygiene. Survey results will be used to guide state and county health policies.

Macro International, a health research company, will call households. They will identify themselves as calling for the Maryland Department of Health and Mental Hygiene. The interviewer will select only one adult in your household to answer questions. If the call comes at a busy time, please tell the interviewer a better time to call back.

Your telephone number was selected at random by a computer. We ask you to take part in this important survey when you are called. Taking part in the survey, or answering any of the questions, is voluntary and all information is confidential

We value your participation and appreciate your time. Thank you for taking part in this important public health activity.

Please call me at 410-767-6878 or email me at rfiedler@dhmh.state.md.us if you have any questions, or want more information.

Sincerely,

Robert Fiedler

Robert Fiedler
Coordinator, Surveillance & Policy Analysis
Center for Health Promotion
Maryland Department of Health & Mental Hygiene

Toll Free 1-877-4MD-DHMH • TTY for Disabled - Maryland Relay Service 1-800-735-2258

Web Site: www.dhmh.state.md.us

STATE OF MARYLAND
DHMH
Maryland Department of Health and Mental Hygiene
201 W. Preston Street
Baltimore, Maryland 21201

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Burlington, VT
Permit No. 253

Just a reminder...

In the next few weeks one adult member of your household will be selected to complete a telephone survey about their use of tobacco products. We ask you to take part in this important survey when you are called. *Taking part in the survey is voluntary and respondents' answers to questions are confidential.*

The interview takes about 5 minutes, and the person interviewed will receive \$20 for their participation.

This survey is being conducted by the Maryland Department of Health and Mental Hygiene.

Questions? Call our research firm at **888-792-6146** or contact Robert Fielder, study coordinator, at the Maryland Department of Health & Mental Hygiene: 410-767-6878 rfiedler@dnhm.state.md.us

APPENDIX G: BOOTSTRAP TABLES

Table A: Smoke CDC 1

Current Smokers	Median Number of Respondents Represented	Median Prevalence	Median Effect Size	95% Confidence Interval	Difference Test
All Respondents	21,777	12.9	0.14	(-0.35, 0.59)	ns
Minority Status					
Minority	4,486	11.8	0.22	(-0.50, 0.83)	ns
Caucasian	16,897	13.5	0.12	(-0.53, 0.70)	ns
Sex					
Male	8,314	14.6	0.09	(-0.62, 0.72)	ns
Female	13,465	11.4	0.17	(-0.51, 0.82)	ns
Region					
Baltimore Region	8,435	14.5	0.37	(-0.46, 1.22)	ns
Suburban Washington Region	3,935	8.9	-0.07	(-0.86, 0.49)	ns
Southern Maryland Region	2,355	14.9	0.25	(-1.38, 1.40)	ns
Western Maryland Region	2,212	15.5	-0.50	(-1.77, 0.71)	ns
Upper Eastern Shore Region	2,780	16.0	0.24	(-0.82, 1.21)	ns
Lower Eastern Shore Region	2,061	17.1	-0.25	(-1.81, 1.01)	ns
Jurisdiction					
Allegany County	675	15.6	-0.42	(-2.38, 1.68)	ns
Anne Arundel County	1,665	13.8	0.48	(-0.71, 1.66)	ns
Baltimore County	1,356	15.7	0.15	(-1.83, 2.20)	ns
Calvert County	651	19.5	-0.99	(-5.58, 1.19)	ns
Caroline County	421	13.9	0.04	(-2.37, 2.43)	ns
Carroll County	945	12.2	0.93	(-1.04, 3.08)	ns
Cecil County	1,035	19.1	0.18	(-1.54, 1.93)	ns
Charles County	973	11.8	1.31	(-0.87, 3.38)	ns
Dorchester County	453	16.5	-0.39	(-2.89, 2.40)	ns
Frederick County	1,057	10.1	0.92	(-0.52, 2.62)	ns
Garrett County	567	16.1	-0.89	(-3.04, 1.20)	ns
Harford County	1,422	16.3	-0.41	(-1.87, 0.84)	ns
Howard County	1,650	7.2	0.65	(-0.38, 1.77)	ns
Kent County	453	16.7	0.92	(-3.35, 3.52)	ns
Montgomery County	1,447	7.5	-0.34	(-1.58, 0.41)	ns
Prince Georges County	1,431	10.8	0.00	(-1.15, 0.87)	ns
Queen Annes County	439	14.3	-0.05	(-2.60, 2.30)	ns
St. Mary's County	731	14.7	0.20	(-1.56, 1.96)	ns
Somerset County	470	16.6	1.00	(-2.87, 4.51)	ns
Talbot County	432	11.4	0.57	(-1.77, 3.76)	ns
Washington County	970	15.2	-0.44	(-2.47, 1.33)	ns

Current Smokers	Median Number of Respondents Represented	Median Prevalence	Median Effect Size	95% Confidence Interval	Difference Test
Wicomico County	683	17.3	-0.18	(-2.69, 1.57)	ns
Worcester County	455	17.0	-0.52	(-3.98, 1.79)	ns
Baltimore City	1,397	18.8	1.03	(-1.24, 2.83)	ns

Table B: Plan Quit

	Median Number of Respondents Represented	Median Prevalence	Median Effect Size	95% Confidence Interval	Difference Test
All Respondents	2,535	78.2	1.93	(0.46, 3.65)	p<0.05
Minority Status					
Minority	577	83.9	1.40	(-0.33, 3.81)	ns
Caucasian	1,918	76.2	2.15	(0.36, 4.30)	p<0.05
Sex					
Male	1,128	74.0	2.31	(0.39, 5.25)	p<0.05
Female	1,407	83.3	1.29	(-0.12, 2.95)	ns

Table C: Plan Quit within Timeframe

	Median Number of Respondents Represented	Median Prevalence	Median Effect Size	95% Confidence Interval	Difference Test	
Next 30 days	All Respondents	2,535	18.0	-0.11	(-1.70, 1.28)	ns
	Minority Status					
	Minority	577	24.4	-0.27	(-2.90, 1.99)	ns
	Caucasian	1,918	16.0	-0.01	(-1.94, 1.65)	ns
	Sex					
	Male	1,128	17.5	-0.22	(-2.52, 1.81)	ns
	Female	1,407	18.7	0.10	(-2.29, 2.06)	ns
Next 3 months	All Respondents	2,535	13.9	-0.09	(-1.32, 1.00)	ns
	Minority Status					
	Minority	577	16.5	0.79	(-1.64, 2.80)	ns
	Caucasian	1,918	13.3	-0.32	(-1.98, 0.92)	ns
	Sex					
	Male	1,128	11.7	0.05	(-1.42, 1.31)	ns
	Female	1,407	16.4	-0.14	(-2.56, 1.46)	ns
Next 6 months	All Respondents	2,535	10.2	1.75	(0.07, 4.11)	p<0.05
	Minority Status					
	Minority	577	11.7	1.02	(-1.05, 3.00)	ns
	Caucasian	1,918	9.6	2.03	(-0.12, 5.07)	ns
	Sex					
	Male	1,128	9.5	1.31	(-0.58, 3.20)	ns
Female	1,407	10.9	2.32	(-0.39, 7.12)	ns	

		Median Number of Respondents Represented	Median Prevalence	Median Effect Size	95% Confidence Interval	Difference Test
Next 12 months	All Respondents	2,535	13.8	0.54	(-0.71, 1.82)	ns
	Minority Status					
	Minority	577	12.1	0.76	(-1.24, 2.88)	ns
	Caucasian	1,918	14.1	0.50	(-0.92, 1.94)	ns
	Sex					
	Female	1,407	15.8	0.17	(-1.73, 2.11)	ns
Next 5 years	All Respondents	2,535	14.4	-0.11	(-1.66, 1.18)	ns
	Minority Status					
	Minority	577	13.2	-0.22	(-2.47, 1.56)	ns
	Caucasian	1,918	14.8	-0.10	(-2.05, 1.49)	ns
	Sex					
	Female	1,407	13.9	-0.50	(-3.01, 0.91)	ns
After 5 years	All Respondents	2,535	7.6	-0.06	(-1.09, 0.89)	ns
	Minority Status					
	Minority	577	5.4	-0.32	(-1.82, 0.58)	ns
	Caucasian	1,918	7.7	0.06	(-1.17, 1.21)	ns
	Sex					
	Female	1,407	7.0	-0.43	(-2.01, 0.75)	ns