

NSAF

Methodology Reports

1997 NSAF Response Rates and Methods Evaluation

Report No. 8

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Assessing
the New
Federalism

*An Urban Institute
Program to Assess
Changing Social Policies*

Preface

Introduction

1997 NSAF Response Rates and Methods Evaluation is the eighth report in a series describing the methodology of the 1997 National Survey of America's Families (NSAF). This report has been recently re-issued as a companion to 1999 Report with the same number in that later series.

About the National Survey of America's Families (NSAF)

As discussed elsewhere (e.g., see especially Report No. 1 in the 1997 NSAF methodology series), NSAF is part of the Assessing the New Federalism Project at the Urban Institute, being done in partnership with Child Trends. Data collection for the NSAF was conducted by Westat.

In each rounds of NSAF, carried out so far, over 40,000 households were interviewed, yielding information on over 100,000 people. NSAF has focused on the economic, health, and social characteristics of children, adults under the age of 65, and their families. The sample is representative of the nation as a whole and of 13 states. Because of its large state sample sizes, NSAF has an unprecedented ability to measure differences between the 13 states it targeted.

About the 1997 and 1999 NSAF Methodology Series

The 1997 and 1999 methodology series of reports have been developed to provide readers with a detailed description of the methods employed to conduct the 1997 NSAF. The two series are nearly parallel, except for the documentation of the public use files, where an on-line system is being used for the 1999 survey and we are planning to reissue the 1997 files on a similar basis.

Report No 1 in the 1997 series introduces NSAF. Report Nos. 2 through 4 in both series—plus Report No. 14 in the 1997 series—describe the sample design, how survey results were estimated and how variances were calculated. Report Nos. 5 and 9 in each series describe the interviewing done in for the telephone (RDD) and in-person samples. Report Nos. 6 and 15 in the 1997 series and Report No. 6 in the 1999 series displays and discusses the comparisons we made to surveys that partially overlapped NSAF in content—including the Current Population Survey and the National Health Interview Survey, among others. Report Nos. 7 and 8 in both series cover what we know about nonresponse rates and nonresponse biases. Report No. 10 in both series covers the details of the survey processing, after the fieldwork was completed, including the imputation done for items that were missing. Report No. 11 in both series introduces the public use files made available.

In the 1997 series, there were additional reports on the public use files available in a PDF format as Report No. 13, 17-22. These will all eventually be superceded by the on-line data file codebook system that we are going to employ for the 1999 survey. The 1997 and 1999 NSAF questionnaires are available respectively as Report No. 12 in the 1997 series and Report No. 1 in the 1999 series. Report No. 16 for the 1997 series, the only report not so far mentioned contains

occasional papers of methodological interest given at professional meetings through 1999, regarding the NSAF work as it has progressed over the years since 1996 when the project began.

About this 1997 Report

Report No. 9 describes methods employed to complete the telephone component of the 1999 NSAF including a list-assisted method to select the random digit dialing (RDD) sample of telephone numbers and computer-assisted telephone interviewing (CATI) for screening and interviewing. Subsampling of telephone households is described, as is how respondents were selected, information on the topics covered during the interview, and data quality control methods used. The report concludes that there were few difficulties with the telephone interviewing component of the NSAF. Those that did exist, primarily related to within household coverage issues and family definition problems.

For More Information

For more information about the National Survey of America's Families, contact Assessing the New Federalism, Urban Institute, 2100 M Street, NW, Washington, DC 20037, telephone: (202) 261-5886, fax: (202) 293-1918, Website: <http://newfederalism.urban.org>. For more information about this report, contact VadenkN1@Westat.com.

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Chapter 1

Introduction

This report describes the response rates from the 1997 National Survey of America's Families (NSAF). The response rates are given and the methods used to compute these rates are explained. The report also reviews approaches used to increase the response rates and research undertaken in the survey to support that goal.

The response rates described in this report differ from rates given in other reports in this series because they take the estimation weights into account. This is an important distinction. For example, the response rates in the In-Person Survey Methods Report No. 5 differ from those in this report because of this reason. This idea is discussed later in this chapter and more completely in the second chapter.

The third chapter gives a brief description of the procedures used in conducting the survey as a means of explaining how the response rates were achieved. These procedures are described in more detail in the In-Person Survey Methods Report No. 5 and in the Telephone Survey Methods Report No. 9. The overview contained here is also valuable for understanding the summary of research related to the effectiveness of the methods that is given in chapter 6.

Chapters 4 and 5 give details on the methods used to compute the response rates and give tables of response rates for important subgroups, such as telephone and nontelephone households. The methods used to compute the rates are relatively complex and are related to the estimation procedures that are in the Snapshot Survey Weighting Report No. 3 in this methodology series. The last part of chapter 5 examines how the response rates from the 1997 NSAF compare to those achieved in similar surveys. Since telephone sampling was used in the vast majority of interviews, the discussion in that section focuses on other telephone surveys.

The final chapter summarizes the experiments conducted during the survey and resulting research findings on the effectiveness of methods used to increase the response rates. The topics include features of the survey design and incentives used to motivate sample persons to respond.

The rest of this chapter gives an overview of the survey, the reason for reporting response rates from this survey, and the relationship of this report to others in the 1997 NSAF methodology series.

1.1 Overview of the Survey

The NSAF collected information on the economic, health, and social dimensions of the well-being of children, adults under the age of 65, and their families in 13 states, Milwaukee, and the balance of the nation (see figure 1-1). In this section we briefly outline the sample design features. The details on the design are given in the 1997 NSAF Sample Design Report No. 2, another report in this series.

**Figure 1-1.
Study Areas**

Alabama	Massachusetts	New Jersey	Milwaukee County
California	Michigan	New York	Balance of Wisconsin
Colorado	Minnesota	Texas	Balance of Nation
Florida	Mississippi	Washington	

The primary goal of the survey was to obtain social and economic information about children in low-income households (income below 200 percent of the poverty threshold). Similar data were also collected on children in all households, low-income adults under age 65, and on other adults under age 65.

The two components of the survey were a random digit dialing (RDD) survey of households with telephones, and an area sample conducted in person for those households without telephones. This dual-frame approach is further described in Waksberg et al. (1997).

In the RDD sample, screener-based subsampling of households was used to sample low-income households at a higher rate than other households. A very short income question was asked during the RDD screening interview, and those that reported an absence of children or reported incomes above 200 percent of the poverty threshold were subsampled. In the area sample, blocks with very high telephone coverage rates as of the 1990 Census were excluded to reduce costs.

Within both the RDD and the area samples, household members were subsampled to reduce the respondent burden. If there were multiple children under age six, one was randomly selected. The same was done for children six to 17 years old. Data were collected from the most knowledgeable adult (MKA) in the household for the sampled child. During the MKA interview, data were also collected about the MKA and about his/her spouse/partner. Most questions asked about the MKA were repeated in reference to the spouse/partner; however, some questions on health insurance and health care utilization were asked in reference to only one of the two. The target of these questions was randomly assigned to either the MKA or his/her spouse/partner. Questions asked only about the MKA were those related to feelings, religious activities, and opinions.

Other adults in households with children were subsampled, as were adults in adult-only households. Adults were eligible only if they would not have been MKAs for other children in the household if those children had been selected. Self-response was required for sampled adults — with proxy data collected about his/her spouse/partner (if living in the same household). Data were not collected directly from the spouse of a sampled adult. As in the MKA interview, there were also some questions related to feelings, religious activities, and opinions that were asked only about the sampled adult.

1.2 Purpose of Reporting Response Rates

Response rates are used to assess various aspects of the quality of a survey (Madow et al. 1983). One purpose of reporting response rates is to provide a measure of the success of the survey at representing the population sampled. This is the main objective of this report. To accomplish this goal, response rates are weighted so that the weighted response rates indicate the proportion of the population that responded. For example, since the balance of the United States includes half of the total population, the response rates are weighted so the balance of the United States accounts for 50 percent of the overall response rate.

The rationale for using weights in computing the response rate is that the bias of an estimate, \bar{y} , is a function of the response rate. Suppose the population can be partitioned into strata of respondents (R) and nonrespondents (NR), and the estimate from the survey is computed from observing the sample from the respondent stratum (without any modification of the inverse of the selection probability weights). The bias of a survey estimate of a mean is

$$bias(\bar{y}) = (1 - r)(\bar{Y}_R - \bar{Y}_{NR}),$$

where r is the appropriately weighted response rate and the quantity on the right is the difference in the means between the respondent and nonrespondent strata (Lessler and Kalsbeek 1992). This formulation clearly shows the bias increases as the response rate decreases if the difference in characteristics between respondents and nonrespondents remains constant. If the response rates are not weighted, this relationship does not hold. Returning to the example, if the balance of the United States response rate is not weighted to account for 50 percent of the population, then the response rate cannot be used in the bias equation.

The weighted response rates are not the most appropriate ones for some purposes. From an operational perspective, unweighted response rates are important to understand how many sampled units (households, persons, etc.) participated. Unweighted response rates are especially valuable for evaluating the effectiveness of specific field operations, for understanding whether cooperation is differential by subgroup, and for determining whether other methods should be used in future surveys to improve cooperation. Unweighted response rates are used explicitly for this purpose in chapter 6 to evaluate the results of experiments conducted during the survey. The unweighted rates are also presented in other reports in this series, namely the Sample Design Report No. 2, the In-Person Survey Methods Report No. 5, and the Early NSAF Nonresponse Studies Report No. 7.

1.3 Related Reports

The material covered in this report is closely related to other reports in this series. The relationship to the unweighted response rates presented in the Telephone and In-Person Survey Methods reports was already mentioned. The sample design (Report No. 2) and weighting procedures (Report No. 3) are also closely tied to the response rates described in this report.

Another report in this series, Early NSAF Nonresponse Studies Report No. 7, also addresses the issue of nonresponse. That report attempts to examine directly the potential biases that might

result from nonresponse in the telephone sample. Since the bias is a function of the differences between respondents and nonrespondents as noted above, one of the methods used to assess potential bias is based on data collected from a special survey of nonrespondents to the 1997 NSAF. That report presents estimates of the bias based on estimates of the observed differences between respondents and nonrespondents and concludes that there is little evidence of important nonresponse errors.

Chapter 2.

Definition and Level of Reporting

Response rates are essentially the ratio of the number of units interviewed to the eligible number of sampled units, weighted to represent the appropriate proportion of the population. However, the definition of a response rate is more complicated than this simple statement implies. The definition of response rates is discussed in the first section of this chapter.

Since the primary purpose of presenting response rates in this report is analytic, the response rates are reported separately for the main analysis groups — children (age less than 18) and adults (ages 18 to 64). In addition to these main groups, response rates are presented for key subgroups of interest such as MKAs. These reporting levels are presented in more detail in the second section.

2.1 Definition

An essential first step is to define “response rate” because the term is used in so many different ways. An important effort to standardize the reporting of response rates was a special report prepared by the Council of American Survey Research Organizations (CASRO) in 1982.¹ The CASRO report recommends that the RDD survey response rate be defined as the ratio of completed interviews to eligible reporting units.

While the concept is easily understood, the application of it in RDD surveys is not so simple. The largest single problem in estimating response rates in RDD surveys is the determination of the eligibility of some of the sampled numbers from the RDD sampling frame. Some telephone numbers are never answered, even after being called many times over many days; for other telephone numbers the only response is from an answering machine. The eligibility of these numbers cannot be determined directly and this makes the definition of a response rate ambiguous.

Groves and Lyberg (1988) define RDD response rates in terms of the following outcomes from dialing the telephone numbers: completed interview, partial interview, noncontacted but known eligible numbers, unanswered numbers, refused eligible numbers, noneligible units, and other noninterview units. These are essentially the units used to compute response rates from the RDD sample in the 1997 NSAF. In this regard, each partial interview is classified as being either a complete or a nonrespondent. Lyberg and Dean (1992) discuss nonresponse rates in a more general review.

The response rates in the NSAF had to be computed in stages. First, units with unknown eligibility were assigned to be either eligible or ineligible. The assignment rule was based on external information on eligibility or was done proportional to the eligibility rate for those units that could be classified with respect to eligibility. The latter rule is the one suggested in the

¹ Another useful guide in calculating response rates is provided by the American Association for Public Opinion Research (AAPOR, 1948). A copy of this report can be found at the AAPOR website (<http://www.aapor.org>).

CASRO report. Once the units with unknown eligibility were assigned, the computation of the response rate was done as the ratio of responding units to eligible units.² These ratios were then weighted so that the entire population was appropriately represented.

The next step in computing response rates depended on the unit being analyzed. The response rate can refer to a particular part of the interview process, such as the screening interview or the overall response rate for all types of interviews attempted. For example, to compute the response rate for the child extended interview, the numerator of the rate is the number of completed child interviews, and the denominator is the number of children sampled in the households that completed the screening interview. The overall response rate is the product of component rates. In this case, the overall response rate for estimates of children is the product of the extended child response rate and the screener response rate. This definition has important implications that are addressed below.

2.2 Levels

As noted above, the multistage nature of the sample means that the rates are computed at the screening or household level and multiplied by the rates at the extended interview (or person) level to obtain the overall or joint rates. This raises additional issues, especially for subgroups of interest. For example, the overall response rate for children in households reporting low-income at the screener is the product of the screener response rate for *all* households and the extended child response rate for children in low-income households. The reason and importance of this are now discussed.

To calculate the response rate for a subgroup, all the units in both the numerator and denominator of the rate must be classified as members of the subgroup.³ Thus, data must be available to classify all sampled units, not just respondents, so that the response rate can be computed separately for each subgroup. For the example given above, it is not possible to estimate response rates separately by poverty status at the household level since poverty status is only obtained for responding households.

On the other hand, the response rate can be computed by poverty status at the extended interview level since a measure of poverty is obtained for all households sampled for extended interviews in the screening interview. However, this rate is conditional in the sense that it relies on the set of households that responded to the screening interview. Basically, the conditional rate can be computed by assuming that all units in the subgroup have the same response rate at the household level. This may not be the actual situation. For example, if low-income households respond in the screener at a different rate than high-income households, then the conditional

² A small percentage of telephone numbers that were called early in the survey but did not complete the screener were nonworking or nonresidential when called later. For the screener these were classified as nonworking or nonresidential. If a household that completed the screener had a nonworking number when called later, it was classified as a nonrespondent.

³ Sometimes it is necessary to estimate the proportion of units that are in the subgroup. For example, as mentioned earlier, some telephone numbers are never classified by residential status because they are never answered despite repeated call attempts. The proportion of these numbers that are residential is estimated. The specific procedures used for this are described in chapter 4.

extended response rate for low-income persons will be misleading in that it cannot account for the differential rate at the household level.

At the household level, data on the RDD sample of telephone numbers are very limited; the telephone numbers can be classified by geography (study area and metropolitan status) and by whether there was an address for the telephone number that could be used to send an advance mailing. For the area sample, geographic data are available. At the person level, additional data from the screener that can be used are screener poverty status and whether the household has eligible children. Response rates can be produced by the age of the child (young or old), and by adult type (MKA, or other adult).

Since reporting levels are constrained by the lack of data for nonrespondents, the ability to examine the response rates for some of the key analytic subgroups of interest is limited. To overcome this, at least partly, the overall or joint household and person response rates are computed by multiplying the screener response rate for all households by the extended interview response rate for the particular group. As the example of reporting by poverty status illustrates, this method does not account for any differential rates for the subgroup at the household level. This is an important caveat that should be kept in mind when examining the rates for subgroups.

The next chapter describes some of the procedures used to achieve the response rates in the 1997 NSAF. The specific methods for computing the rates and rates by study area and for key subgroups are then presented.

Chapter 3.

Overview of Process to Contact Respondents

This chapter gives a brief overview of the procedures used to contact sampled households and to encourage them to respond to the survey. This overview is intended to provide some background on the methods without describing them in detail. The full set of methods and procedures are described in two other reports in this series, the In-Person Survey Methods Report No. 5 and the Telephone Survey Methods Report No. 9. Those reports describe the selection, training, and evaluations of the interviewers in the study. The overview in this chapter largely reviews the handling of refusals rather than other types of nonresponse.

As mentioned earlier, the survey contained both a screening and an extended interview. In the area sample, a prescreening interview was used to determine if the household was eligible (did not have a telephone and had at least one person under 65 years), but this is not discussed here. The screening interview consists of a three to five minute set of questions designed to select persons for an extended interview. This involved determining if there were any persons under 65 years old in the household and whether the family was above or below 200 percent of poverty.

If there was someone in the eligible age range and the household was sampled (based on poverty status), one or more respondents were selected for extended interviews. Each extended interview averaged between 25 and 40 minutes in length and covered a wide range of topics, including health, education, child care, income, and receipt of social services. Information about the interviews is available in the NSAF questionnaire at <http://newfederalism.urban.org/nsaf/index.html>.

The procedures used to encourage respondents to participate in the study were different for the telephone and area sample. All households that were eligible in the area sample were contacted in person and offered a cash incentive to participate. The rest of this chapter discusses procedures used in the telephone sample.

In the telephone sample, there were three stages in the process to convince respondents to participate at both the screener and extended levels. At the screener level, initial contact was made with a respondent who was at least 18 years old and lived in the housing unit. If this person refused to participate, a second attempt was made to complete the screener after waiting at least two weeks after the first refusal. If the respondent refused at this point, a second refusal conversion attempt was made at least another two weeks later. A similar process was used at the extended level. The respondent was asked to participate in the study up to three times — an initial attempt and two attempts at refusal conversion at each level.

As discussed in chapter 6, a number of experiments were conducted to assess methods to increase participation at both the initial contact and refusal conversion stages. As a result of these experiments, the study adopted several different “treatments,” primarily at the stage of refusal conversion, to increase participation. At the screener level, telephone numbers were sent to a reverse directory service and matched against addresses listed in the white pages. For those numbers where a match was found, a prenotification letter was sent prior to the initial contact. If a refusal occurred at the screener level, the household was sent \$5 if there was an address for that

household. If the household was in a state with low cooperation rates, the money was sent in an express letter. All other letters were sent using first class mail. Before trying to convert households a second time, a letter was sent to the household by first class mail.

No prenotification letter was sent before attempting the extended interview, except in those cases when a Version 1 screener was administered, and the screener respondent provided the address for the household.

As discussed later in chapter 6, the Version 1 screener consisted of breaking up the administration of the interviews into two stages. In the first stage, the screener attempted to find an eligible household member. If an eligible household member was found, the household was called back several weeks later. At the callback, the eligible respondent was asked to verify the screener information and to complete the extended interview. The screener was not considered to be complete until the eligible respondent completed verification of the screener information.

At the end of the initial completion of the Version 1 screener, the interviewer asked if the respondent would like to have information mailed to the person selected for the interview. If so, then a letter with a study brochure was mailed to the respondent.

The Version 1 procedure was implemented at the beginning of the field period in January 1997. In the middle of February, the Version 2 procedure was implemented, replacing the Version 1 method. The Version 2 method consisted of trying to complete both the screener and extended interview in the same call. Rather than stopping the call at the end of the screener, as done with Version 1, the Version 2 procedure immediately asked for the extended respondent and attempted to complete the longer interview. For Version 2, therefore, extended respondents did not receive any material prior to the first attempt to complete the interview.

If respondents refused to complete the extended interview, those for whom an address was available from the reverse directory were sent letters using express mail. Those households that had not received money for completing the screener received \$5. If the respondent refused a second time, they were sent a letter using express mail. Those that had not received money prior to the previous refusal were sent \$5. At the end of the field period, all incomplete RDD extended interview cases were offered a \$25 incentive to complete an extended interview.

The methods used to elicit cooperation from respondents in the telephone survey were intensive. Using monetary incentives, in particular, was somewhat unusual in a telephone interview survey. These methods were considered necessary to increase the response rates. The evaluation of these and other methods considered in the survey to improve response rates is covered in chapter 6. In the next chapters, the achieved response rates from the survey are defined and described.

Chapter 4. Response Rate Formula

This chapter gives the basic formulas used to compute the response rates for the 1997 NSAF. The three main types of response rates are screener response rates, extended interview response rates, and joint or overall response rates. The sections below address the methods for computing response rates for each of these types.

4.1 Method of Computing Screener Response Rates

The methods used to compute the response rates for the telephone and in-person samples at the screening level are presented first. The methods are similar but have different components. After the method for each of these samples is described, the method of computing an overall screener response rate that combines the telephone and in-person samples is presented.

For the telephone sample, the screener response rates have one factor used in all study areas and all types of households and a second factor that is only applied to adult households (those with no children under 18). The second factor reflects the additional level of nonresponse for telephone numbers that were rereleased to increase the sample size of adults (the adult only households (IK) described in the Sample Design Report No. 2.

The first factor of the telephone screener response rate is based on the typical response rate formula which is

$$scr_tel1 = \frac{\sum w_i^{elig.+inelig.resp}}{\sum w_i^{resident.}}, \quad (4-1)$$

where w_i is the baseweight for telephone number i , adjusted to include the sum of the weights for 27 percent of the telephone numbers that were never answered and 63 percent of the telephone numbers that were only answered by answering machines. The percentage for the never-answered telephone numbers was estimated in the National Immunization Survey from calls made to the telephone company business office (see table 3 in Shapiro et al. 1995). The percentage for the answering machine telephone numbers was estimated from the 1995 National Household Education Survey and is reported in Brick and Broene (1997).

Notice that equation (4-1) has the form of the typical response rate. The numerator is the sum of the weights for all residential telephone numbers where the household responded, even if no one was sampled for an extended interview. The denominator is the sum of the weights for all residential telephone numbers. The only issue that is troublesome is the assignment of the weights to the denominator for the telephone numbers with unknown eligibility, which is handled as described above.

The second factor for the telephone screener response rates affects only study areas where the IK households were rereleased to increase the adult interview sample size. The second factor of the telephone screener response rate, scr_tel2 , has the same form as equation (4-1), but the sum in the numerator is of responding, rereleased telephone numbers and the denominator has both responding and nonresponding numbers. (For sites with no rereleased adult sample $scr_tel2=1$.)

For households with children, the telephone screener response rate is scr_tel1 . For households with adults only, the telephone screener response rate is the product of scr_tel1 and scr_tel2 and is written as scr_tel .

As with the RDD sample, there are two factors for the screener response rate for the area sample. The first factor is for nonresponse for the few segments in New Jersey, Mississippi, and balance of Wisconsin that were never listed.⁴ Since this nonresponse is at the segment level, the factor is also at that level. The factor is again of the form of equation (4-1), with the denominator being the sum of the baseweights of all segments and the numerator being the sum of the weights of the listed segments. We denote this factor as scr_area1 . For study areas in which all segments were listed, $scr_area1=1$.

The second factor in the area screener response rate is at the household level and reflects the effect of nonresponding households. A household is eligible for the area sample if it does not have a telephone and there is at least one person under 65 years old. This factor, scr_area2 , takes account of both the prescreening (searching for eligible households) and screening stages (obtaining the participation of the households in the screening interview). It is also the same form as equation (4-1) with the numerator being the sum of the weights of the eligible nontelephone households and the denominator being the sum of the weights for the responding and nonresponding households. The weights, in this case, were adjusted for both the unlisted segments and for the households that could not be classified by telephone status.

The area screener response rate is the product of the two factors and is written as scr_area .

The overall screener response rate is the weighted average of the telephone and the in-person screener response rates. The weight is the proportion of the population included in the two components, or the proportion of eligible telephone and nontelephone households. The proportion of nontelephone households was estimated directly from the NSAF as the sum of the final weights.

Since the telephone screener response rate in some states is different for households with children and with adults only, the combined screener response rates are also different. The screener response rate for households with eligible children, scr_chld , is

$$scr_chld = \alpha(scrr_tel1) + (1-\alpha)(scr_area), \quad (4-2)$$

where in this case α is the estimated proportion of children in telephone households.

⁴ Three segments were not listed because management would not permit access to the building. One segment was not listed because of dangerous conditions.

For adults, the combined screener response rate is the same form as equation (4-2), but the screener telephone response rate is scr_tel and α is the estimated proportion of adults in telephone households. We will refer to this rate as scr_adlt .

4.2 Method of Computing Extended Interview Response Rates

The extended interview response rate is computed in a similar fashion. The extended response rates are the percent of the children and adults sampled in the screener who completed the appropriate extended interview.

The extended child response rate again has the same form as equation (4-1) with the numerator being all respondents and the denominator being all respondent and nonrespondent cases. The sum of the weights in this case was the child baseweight, which included all the household level weight adjustments as well as the weight for selecting the child within the household. We refer to this extended response rate as ext_chld . Since data on the age of the children was collected at the screener, this rate can be computed separately for younger (under six) and older (six to 17) children.

The response rate computation for adults is somewhat more complex than for children because of the method of sampling. As noted in chapter 1, all adults between 18 and 65 years old were not enumerated in households during the screening interview. The full enumeration did not take place until the first extended interview was conducted. As a result, there is an additional component in the extended response rate at the household level for adults to reflect this nonresponse. The additional household nonresponse component is due to households in which no sampled person completed an extended interview even though the screener interview was completed. The second component is at the person level and is identical to the child component.

The first component was computed separately by the type of household (child or adult only) depending on the type of adult sampled, although the method of computation is the same. This was necessary because the screener response rates are different for these two types of households, and the extended rates are conditional on the screener being completed. For both adults living in households with children, and for adults living in households with no children, the form of the rate is given by equation (4-1) with the numerator being summed over households where at least one extended interview was completed and the denominator being summed over all households sampled for an extended interview. The weight being summed in this case is the household poststratified weight. We call this rate ext_hh , remembering that the rate is computed separately for households with children and those without children.

The second component of the adult extended response rate is at the person level and is due to sampled persons who did not respond. It is exactly the same form as given for children and we denote it as ext_within . As done for children, the type of adult can be partitioned into categories such as MKA, "straggler," and other adults. This subdivision can be carried even further by considering the spouses of the adults. For the purposes of computing response rates, the spouse/partners of the adult is included with the sampled adult. The only exception is for MKAs

where some analysis is conducted only of the adult MKA without including the spouse/partner. We discriminate between the two by referring to the MKA with spouse/partner data as MKS and the MKA alone as MKA.

Now, the combined extended response rates can be computed for each type of adult and over all types of adults. The extended response rate is just the product of the two components, $ext_adlt=(ext_hh)(ext_within)$. These rates were computed separately by the type of adult: MKA, MKS, “stragglers” (adults in households with children who are not MKAs or their partner) and their spouse/partners, and other adults and their spouse/partners.

To combine across the various types of adults, the same type of weighting procedure used to combine the telephone and nontelephone screener response rates given by equation (4-2) is used. For example, one important subgroup consists of adults who were not MKAs or the spouse of an MKA (“stragglers” and adults in households without children). The extended response rate for this group of adults, called non-MKS, is like the form of equation (4-2) with α being the estimated proportion of all non-MKAs who were “stragglers”. The estimate was made from the final adult weights. For all adults, the same type of weighting is required, but now it is across three types of adults. This requires a simple extension of equation (4-2), so that each type of adult is weighted in proportion to their estimated contribution to the total number of adults.

4.3 Method of Computing Joint Response Rates

The joint response rates are the product of the appropriate screener and extended response rates. For child interviews, the joint response rate is

$$jnt_chld = (scr_chld)(ext_chld).$$

For MKS adults, the joint response rate is

$$jnt_MKS = (scr_chld)(ext_MKS),$$

where ext_MKS is ext_adlt computed separately for MKS adults. The joint response rate for MKAs without including their spouses is

$$jnt_MKA = (scr_chld)(ext_MKA).$$

For non-MKSs, the joint response rate must be computed using equation (4-2). It is

$$jnt_nonMKS = \alpha_{strg}(scr_chld)(ext_strg) + (1 - \alpha_{strg})(scr_adlt)(ext_othr),$$

where α_{strg} is the estimated proportion of all non-MKS who were “stragglers,” and ext_othr is the extended response rate for other adults. Finally, for all types of adults the joint response rate is

$$jnt_adlt = scr_chld(\alpha_{strg}(ext_strg) + \alpha_{MKS}(ext_MKS)) + \alpha_{othr}(scr_adlt)(ext_othr),$$

where α'_{strg} is the estimated proportion of all adults who were “stragglers,” α_{MKS} is the estimated proportion of all adults who were MKS, and α_{othr} is the estimated proportion of all adults who were in households without children. Note that these three values sum to one.

The formulas given in this chapter were applied to compute the response rates from the 1997 NSAF. The response rates achieved using these formulas are given in the next chapter.

Chapter 5.

Tables of Response Rates

This chapter presents tables of response rates from the 1997 NSAF and a comparison of these rates with those from other surveys. The first section contains tables of the screener response rates. The second section has tables of the extended and joint response rates. The last section examines the responses rates from the 1997 NSAF with the rates from other RDD surveys. All of the rates in the tables in this chapter are weighted.

5.1 Screener Response Rates

The first four tables shown here are the child screener response rates. Table 5-1 gives the child screener response rates for each study area and nationally, overall and by sample type. The overall national child screener response rate is 77.8 percent, with the area screener response rate at 87.0 percent and the telephone response rate at 77.4 percent. The screener response rates by study areas range from 69.9 percent in New Jersey up to 85.4 percent in Mississippi. The area and RDD rates vary substantially across the sites.⁵ The unusual result in Washington where the RDD rate is higher than the area rate (and to a lesser extent in Massachusetts) was due to troubles in staffing discussed in the In-Person Survey Methods report.

Table 5-2 shows that the screener response rate for households with children in metropolitan areas is lower than in nonmetropolitan areas. This is a very common finding in surveys (Groves and Couper 1998). Table 5-3 further divides the child screener response rate by metropolitan area and sample type. Table 5-4 gives the child screener response rate for the RDD sample only, by whether or not a letter could be mailed to the number. If a mailing address could be associated with the telephone number, advance letters and different incentives were used to increase response rates. The result shows the households that were “mailable” participated at a much greater level, nearly 10 percentage points. It should be noted that this increase cannot be attributed to be an effect of the mailings because households for which addresses could be located may have been naturally more cooperative. This issue is addressed more directly in chapter 6.

Tables 5-5 through 5-8 present the adult screener response rates, using the exact same subgroups. For states such as Alabama where there was no rerelease of IK in the telephone sample, the child and adult screener response rates are identical. In the states with the rerelease (Massachusetts, Michigan, New Jersey, and balance of the United States), the adult screener response rates are somewhat lower than the child rates. Overall, the adult screener response rate is 76.6 percent, or about 1 percent lower than the child screener response rate. The patterns of response rates for the adults are similar to those of the children, as can be seen by inspecting the tables.

⁵ The weighted and unweighted RDD response rates at the screener level are virtually identical because an equal probability sample was selected in each site. Weighting affects the total RDD rates. For the area sample, the unweighted rates in the In-Person Survey Methods report are different from those in this report due to weighting.

5.2 Extended and Joint Response Rates

Tables 5-9 through 5-14 give the extended and joint response rates for the child interviews. Table 5-9 shows the extended response rates range from 78.1 percent in California to 89.3 percent in Minnesota. The national child extended response rate is 84.1 percent. The joint response rates, which are the product of the appropriate screener and extended rates weighted by the proportion of the population, are also in table 5-9. The overall joint child response rate is 65.4 percent, with rates varying from a low of 55.5 percent in New Jersey to a high of 74.5 percent in Minnesota.

Table 5-10 shows the extended child response rates are much higher for the area sample (95.7 percent) than for the RDD sample (83.4 percent). This difference carries over to the joint child response rates, where the area response rate is 15 to 20 percent higher than the RDD response rate. Since only a very small percentage of the population does not have a telephone, the overall response rate of 65.4 percent is much closer to the RDD rate than the area rate.

Table 5-11 gives the child extended and joint response rates by metropolitan status. The difference noted in the rates by metropolitan status at the screener level are even greater in the joint rates because the extended rates for metropolitan areas are also lower than for nonmetropolitan areas.

Table 5-12 gives the extended and joint response rates by poverty status as determined in the screening interview. Screener poverty status is the outcome of asking one question about income that classifies households as above or below the 200 percent poverty level. As such, it is not a reliable measure of poverty, but it is the only item available that could be used to compute the rates. The child extended and joint rates are not very different for those above and below 200 percent poverty level.

When asked the screener income question, those respondents who refused or said they did not know were classified as unknown. The child interviews with unknown poverty status had a significantly lower response rates than either the above or below poverty children. This type of result has appeared in other surveys and the explanation proposed is that failing to answer such a question in the screening interview is an indicator of an increased propensity to refuse the extended interview. It appears to hold true in the NSAF.

It is also worth reiterating that the extended response rates for this subgroup are conditional, so the lack of a substantial difference between the extended and joint response rates for those above and below 200 percent poverty does not mean the overall rates are actually equal. It is possible that the low- or high- income households responded at different rates to the screener interview, but it is not possible to determine this from the data available. The joint response rates for characteristics such as metropolitan status and study area are not conditional because these data are available and used to compute the rates at both the screener and extended rates by subgroup.

Table 5-13 gives the child extended and joint response rates by the age of the child. Both the extended and joint rates for older and younger children are approximately equal. Table 5-14 presents the child extended and joint response rates by mailing status. Those mailed an advance

letter not only responded at higher rates at the screener level, as discussed earlier, but also at the extended level. The 10 percentage point increase at the screener level (see table 5-4) increased to a 14 percentage point difference in the joint rate after the extended response rate is included. Since mailing status is known for all RDD cases, the joint rate uses screener rates that are computed separately by mailing status and is not a conditional rate.

The remaining tables are for adults. Table 5-15 gives the adult extended and joint response rates by study area and nationally. Both the adult extended and joint response rates are about 5 percent lower than the corresponding child rates; the adult extended rate is 79.9 percent and the adult joint rate is 61.7 percent. Tables 5-16, 5-17, and 5-18 show differences in adult joint response rates by sample type, metropolitan status, and screener poverty status that are very similar to the differences in the child rates discussed earlier.

Table 5-19 gives adult extended and joint response rates by type of adult, where adults are classified as MKA or the spouse/partner of an MKA (MKS as defined in section 3) and all other adults (non-MKS). The MKS extended response rates (84.2 percent nationally) are about 7 percentage points greater than the non-MKS rates (77.0 percent nationally). At the joint level, the difference is above 6 percentage points (65.5 percent for MKS and 59.1 percent for non-MKS). Response rates for MKAs separately are discussed below.

Table 5-20 shows the adult extended and joint RDD response rates by mailing status. As with the child rates, the difference in the joint rates is even greater than the difference in screener rates. Those who were mailed responded at higher rates at both levels.

**Table 5-1.
Child Screener Response Rates, by Sample Type and Study Area**

Study Area	Sample Type		
	Area	RDD	Total
Alabama	86.7%	84.1%	84.3%
Balance of Wisconsin	85.8	83.5	83.5
California	82.8	71.1	71.4
Colorado	89.6	76.0	76.5
Florida	88.1	75.2	75.6
Massachusetts	70.1	72.8	72.8
Michigan	92.2	78.0	78.4
Milwaukee	85.9	81.1	81.2
Minnesota	85.7	83.3	83.4
Mississippi	88.3	85.0	85.4
New Jersey	74.3	69.8	69.9
New York	79.6	71.1	71.2
Texas	84.9	78.0	78.4
Balance of U.S.	89.2	80.0	80.3
Washington	68.0	78.7	78.4
Total	87.0	77.4	77.8

The last adult response rate tables are those for adults identified as MKAs excluding the spouse/partner of the MKAs. Table 5-21 gives the extended and joint MKA response rates nationally and for each study area. These correspond to analysis of MKAs done using the adult weights. The national MKA extended response rate is 84.1 percent and the corresponding joint response rate is 65.4 percent. The national MKA rates are equal to the child rates to the level of precision shown in the table. Even across all the study areas, the MKA rates are almost always within half a percentage point of the child rates. This relationship is expected since the child interview was completed by the MKA. The main reason the rates are not identical is that one MKA could be the respondent for two child interviews and the adult weights are somewhat different from the child weights.

Table 5-22 gives the extended and joint MKA response rates by sample type and study area. These response rates are approximately equal to the corresponding child rates in table 5-10. As a rule of thumb, the response rates for MKAs can be approximated by the child response rates and the differences will generally be small. No other tables of MKA response rates are provided because of this very close relationship.

**Table 5-2.
Child Screener Response Rates, by Metropolitan Status and Study Area**

Study Area	MSA		
	MSA	Non-MSA	Total
Alabama	83.8%	85.3%	84.3%
Balance of Wisconsin	82.9	84.4	83.5
California	71.1	82.3	71.4
Colorado	75.9	79.7	76.5
Florida	75.1	82.6	75.6
Massachusetts	72.7	79.7	72.8
Michigan	77.0	84.4	78.4
Milwaukee	81.2		81.2
Minnesota	82.1	86.4	83.4
Mississippi	81.4	87.6	85.4
New Jersey	69.9		69.9
New York	70.1	83.7	71.2
Texas	77.4	83.8	78.4
Balance of U.S.	78.6	84.7	80.3
Washington	77.6	82.0	78.4
Total	76.1	84.5	77.8

Table 5-3.
Child Screener Response Rates, by Metropolitan Status, Sample Type, and Study Area

Study Area	Sample Type					
	Area			RDD		
	MSA	Non-MSA	Total	MSA	Non-MSA	Total
Alabama	88.8%	85.5%	86.7%	83.6%	85.3%	84.1%
Balance of Wisconsin	92.5	69.8	85.8	82.7	84.6	83.5
California	80.1	100.0	82.8	70.8	80.2	71.1
Colorado	93.0	84.2	89.6	75.4	79.2	76.0
Florida	87.2	100.0	88.1	74.7	82.0	75.2
Massachusetts	70.1		70.1	72.7	79.7	72.8
Michigan	90.9	100.0	92.2	76.6	84.0	78.0
Milwaukee	85.9		85.9	81.1		81.1
Minnesota	85.9	85.6	85.7	82.0	86.4	83.3
Mississippi	78.5	90.8	88.3	81.6	87.0	85.0
New Jersey	74.3		74.3	69.8		69.8
New York	76.9	88.6	79.6	70.0	83.5	71.1
Texas	84.7	85.3	84.9	77.0	83.6	78.0
Balance of U.S.	89.1	89.2	89.2	78.4	84.2	80.0
Washington	53.9	73.4	68.0	77.9	83.2	78.7
Total	85.3	88.7	87.0	75.9	84.1	77.4

Table 5-4.
Child Screener Response Rates for RDD Sample, by Mailing Status and Study Area

Study Area	Mailing Status		
	Mailed	Not Mailed	Total
Alabama	85.9%	81.3%	84.1%
Balance of Wisconsin	85.8	77.3	83.5
California	77.3	68.8	71.1
Colorado	80.0	72.8	76.0
Florida	79.5	70.3	75.2
Massachusetts	76.7	66.7	72.8
Michigan	82.0	72.7	78.0
Milwaukee	84.3	76.7	81.1
Minnesota	86.1	76.6	83.3
Mississippi	86.4	82.4	85.0
New Jersey	76.7	63.1	69.8
New York	75.9	64.9	71.1
Texas	82.3	74.2	78.0
Balance of U.S.	83.7	74.7	80.0
Washington	83.4	74.3	78.7
Total	82.1	72.2	77.4

**Table 5-5.
Adult Screener Response Rates, by Sample Type and Study Area**

Study Area	Sample Type		
	Area	RDD	Total
Alabama	86.7%	84.1%	84.3%
Balance of Wisconsin	85.8	83.5	83.5
California	82.8	71.1	71.4
Colorado	89.6	76.0	76.5
Florida	88.1	75.2	75.6
Massachusetts	70.1	71.4	71.4
Michigan	92.2	76.2	76.6
Milwaukee	85.9	81.1	81.2
Minnesota	85.7	83.3	83.4
Mississippi	88.3	85.0	85.4
New Jersey	74.3	68.3	68.4
New York	79.6	71.1	71.2
Texas	84.9	78.0	78.4
Balance of U.S.	89.2	78.7	79.1
Washington	68.0	78.7	78.4
Total	87.0	76.2	76.6

**Table 5-6.
Adult Screener Response Rates, by Metropolitan Status and Study Area**

Study Area	MSA		
	MSA	Non-MSA	Total
Alabama	83.8%	85.3%	84.3%
Balance of Wisconsin	82.9	84.4	83.5
California	71.1	82.3	71.4
Colorado	75.9	79.7	76.5
Florida	75.1	82.6	75.6
Massachusetts	71.2	79.7	71.4
Michigan	75.2	83.3	76.6
Milwaukee	81.2		81.2
Minnesota	82.1	86.4	83.4
Mississippi	81.4	87.6	85.4
New Jersey	68.4		68.4
New York	70.1	83.7	71.2
Texas	77.4	83.8	78.4
Balance of U.S.	77.4	83.5	79.1
Washington	77.6	82.0	78.4
Total	74.9	83.4	76.6

Table 5-7.
Adult Screener Response Rates, by Metropolitan Status, Sample Type, and Study Area

Study Area	Sample Type					
	Area			RDD		
	MSA	Non-MSA	Total	MSA	Non-MSA	Total
Alabama	88.8%	85.5%	86.7%	83.6%	85.3%	84.1%
Balance of Wisconsin	92.5	69.8	85.8	82.7	84.6	83.5
California	80.1	100.0	82.8	70.8	80.2	71.1
Colorado	93.0	84.2	89.6	75.4	79.2	76.0
Florida	87.2	100.0	88.1	74.7	82.0	75.2
Massachusetts	70.1		70.1	71.3	79.7	71.4
Michigan	90.9	100.0	92.2	74.7	82.9	76.2
Milwaukee	85.9		85.9	81.1		81.1
Minnesota	85.9	85.6	85.7	82.0	86.4	83.3
Mississippi	78.5	90.8	88.3	81.6	87.0	85.0
New Jersey	74.3		74.3	68.3		68.3
New York	76.9	88.6	79.6	70.0	83.5	71.1
Texas	84.7	85.3	84.9	77.0	83.6	78.0
Balance of U.S.	89.1	89.2	89.2	77.2	82.9	78.7
Washington	53.9	73.4	68.0	77.9	83.2	78.7
Total	85.3	88.7	87.0	74.6	82.9	76.2

Table 5-8.
Adult Screener Response Rates for RDD Sample, by Mailing Status and Study Area

Study Area	Mailing Status		
	Mailed	Not Mailed	Total
Alabama	85.9%	81.3%	84.1%
Balance of Wisconsin	85.8	77.3	83.5
California	77.3	68.8	71.1
Colorado	80.0	72.8	76.0
Florida	79.5	70.3	75.2
Massachusetts	75.6	64.9	71.4
Michigan	80.8	70.2	76.2
Milwaukee	84.3	76.7	81.1
Minnesota	86.1	76.6	83.3
Mississippi	86.4	82.4	85.0
New Jersey	75.7	61.3	68.3
New York	75.9	64.9	71.1
Texas	82.3	74.2	78.0
Balance of U.S.	82.7	73.2	78.7
Washington	83.4	74.3	78.7
Total	81.1	70.6	76.2

Table 5-9.
Extended and Joint Child Response Rates, by Study Area

Study Area	Extended	Joint
Alabama	84.8%	71.5%
Balance of Wisconsin	88.5	73.9
California	78.1	55.8
Colorado	82.4	63.0
Florida	81.7	61.7
Massachusetts	82.3	59.9
Michigan	84.3	66.0
Milwaukee	82.7	67.2
Minnesota	89.3	74.5
Mississippi	86.0	73.5
New Jersey	79.5	55.5
New York	80.3	57.1
Texas	81.6	64.0
Balance of U.S.	86.6	69.6
Washington	86.4	67.8
Total	84.1	65.4

Table 5-10.
Extended and Joint Child Response Rates, by Sample Type and Study Area

Study Area	Sample Type					
	Extended			Joint		
	Area	RDD	Total	Area	RDD	Total
Alabama	100.0%	83.2%	84.8%	86.7%	70.0%	71.5%
Balance of Wisconsin	89.9	88.5	88.5	77.1	73.9	73.9
California	87.2	77.6	78.1	72.2	55.2	55.8
Colorado	93.7	81.9	82.4	83.9	62.3	63.0
Florida	97.5	80.9	81.7	85.9	60.8	61.7
Massachusetts	100.0	81.9	82.3	70.1	59.6	59.9
Michigan	100.0	83.5	84.3	92.2	65.1	66.0
Milwaukee	100.0	81.9	82.7	85.9	66.4	67.2
Minnesota	98.0	88.8	89.3	84.0	74.0	74.5
Mississippi	98.6	83.6	86.0	87.1	71.1	73.5
New Jersey	96.6	78.8	79.5	71.8	55.0	55.5
New York	98.5	79.9	80.3	78.4	56.8	57.1
Texas	93.6	80.3	81.6	79.4	62.6	64.0
Balance of U.S.	97.3	85.9	86.6	86.7	68.7	69.6
Washington	95.9	86.1	86.4	65.1	67.8	67.8
Total	95.7	83.4	84.1	83.3	64.6	65.4

Table 5-11.
Extended and Joint Child Response Rates, by Metropolitan Status and Study Area

Study Area	Extended			Joint		
	MSA	Non-MSA	Total	MSA	Non-MSA	Total
Alabama	83.6%	87.6%	84.8%	70.0%	74.7%	71.5%
Balance of Wisconsin	86.1	91.9	88.5	71.4	77.6	73.9
California	77.7	90.2	78.1	55.2	74.2	55.8
Colorado	81.9	84.8	82.4	62.1	67.5	63.0
Florida	81.3	86.4	81.7	61.1	71.4	61.7
Massachusetts	82.1	91.4	82.3	59.7	72.9	59.9
Michigan	83.5	88.1	84.3	64.3	74.4	66.0
Milwaukee	82.7		82.7	67.2		67.2
Minnesota	88.9	90.3	89.3	72.9	78.0	74.5
Mississippi	85.1	86.5	86.0	69.3	75.8	73.5
New Jersey	79.5		79.5	55.5		55.5
New York	79.8	85.4	80.3	55.9	71.5	57.1
Texas	80.5	87.1	81.6	62.3	73.0	64.0
Balance of U.S.	85.4	89.5	86.6	67.1	75.8	69.6
Washington	86.0	88.6	86.4	66.7	72.7	67.8
Total	82.8	89.1	84.1	63.0	75.3	65.4

Table 5-12.
Extended and Joint Child Response Rates, by Screener Poverty Status and Study Area

Study Area	Extended				Joint			
	Screener Poverty Status				Screener Poverty Status			
	Nonpoor	Poor	Unknown	Total	Nonpoor	Poor	Unknown	Total
Alabama	84.5%	85.5%	81.9%	84.8%	71.3%	72.1%	69.0%	71.5%
Balance of Wisconsin	88.7	90.3	75.2	88.5	74.1	75.4	62.8	73.9
California	78.8	78.3	72.5	78.1	56.3	55.9	51.8	55.8
Colorado	82.5	83.2	74.9	82.4	63.1	63.7	57.3	63.0
Florida	82.7	81.9	70.2	81.7	62.5	61.9	53.1	61.7
Massachusetts	83.6	81.2	72.8	82.3	60.8	59.1	53.0	59.9
Michigan	86.7	82.7	66.9	84.3	68.0	64.8	52.4	66.0
Milwaukee	84.1	81.8	72.1	82.7	68.4	66.5	58.5	67.2
Minnesota	90.0	88.7	83.2	89.3	75.0	73.9	69.4	74.5
Mississippi	84.2	87.7	83.3	86.0	71.9	74.9	71.2	73.5
New Jersey	81.1	80.4	58.4	79.5	56.7	56.2	40.8	55.5
New York	82.5	78.3	72.1	80.3	58.7	55.7	51.3	57.1
Texas	82.3	82.8	68.4	81.6	64.5	64.9	53.6	64.0
Balance of U.S.	87.3	87.1	75.6	86.6	70.2	70.0	60.8	69.6
Washington	87.5	85.8	78.1	86.4	68.6	67.3	61.2	67.8
Total	85.1	84.3	73.4	84.1	66.2	65.5	57.1	65.4

Table 5-13.
Extended and Joint Child Response Rates, by Child and Study Area

Study Area	Extended			Joint		
	Age of Child			Age of Child		
	5 and Under	6 to 17	Total	5 and Under	6 to 17	Total
Alabama	84.9%	84.7%	84.8%	71.6%	71.4%	71.5%
Balance of Wisconsin	87.6	91.0	88.5	73.1	76.0	73.9
California	78.3	77.9	78.1	55.9	55.7	55.8
Colorado	83.3	80.2	82.4	63.7	61.3	63.0
Florida	81.7	81.6	81.7	61.7	61.7	61.7
Massachusetts	81.7	83.6	82.3	59.4	60.9	59.9
Michigan	84.3	84.2	84.3	66.1	66.0	66.0
Milwaukee	82.6	82.8	82.7	67.1	67.3	67.2
Minnesota	88.9	90.2	89.3	74.1	75.3	74.5
Mississippi	85.3	87.9	86.0	72.8	75.0	73.5
New Jersey	78.9	80.6	79.5	55.1	56.4	55.5
New York	80.8	79.1	80.3	57.5	56.3	57.1
Texas	81.1	82.6	81.6	63.6	64.8	64.0
Balance of U.S.	86.5	86.7	86.6	69.5	69.7	69.6
Washington	87.1	84.9	86.4	68.3	66.6	67.8
Total	84.1	84.1	84.1	65.4	65.4	65.4

Table 5-14.
Extended and Joint Child RDD Response Rates, by Mailing Status and Study Area

Study Area	Extended			Joint		
	Mailing Status			Mailing Status		
	Mailed	Not Mailed	Total	Mailed	Not Mailed	Total
Alabama	86.5%	79.2%	83.2%	74.3%	64.4%	70.0%
Balance of Wisconsin	90.0	85.4	88.5	77.2	66.0	73.9
California	81.8	76.3	77.6	63.3	52.5	55.2
Colorado	86.6	78.4	81.9	69.3	57.1	62.3
Florida	85.7	76.7	80.9	68.2	53.9	60.8
Massachusetts	87.1	75.4	81.9	66.9	50.3	59.6
Michigan	88.7	78.1	83.5	72.7	56.8	65.1
Milwaukee	86.7	77.6	81.9	73.1	59.5	66.4
Minnesota	91.6	83.2	88.8	78.9	63.7	74.0
Mississippi	86.2	79.9	83.6	74.5	65.8	71.1
New Jersey	85.4	72.9	78.8	65.5	46.1	55.0
New York	84.9	75.0	79.9	64.4	48.7	56.8
Texas	82.9	78.5	80.3	68.3	58.2	62.6
Balance of U.S.	88.5	83.1	85.9	74.1	62.1	68.7
Washington	91.4	82.4	86.1	76.2	61.2	67.8
Total	87.3	79.9	83.4	71.6	57.6	64.6

Table 5-15.
Extended and Joint Adult Response Rates, by Study Area

Study Area	Extended	Joint
Alabama	82.3%	69.4%
Balance of Wisconsin	85.2	71.2
California	74.5	53.2
Colorado	80.2	61.4
Florida	78.2	59.1
Massachusetts	77.8	56.0
Michigan	80.5	62.3
Milwaukee	81.1	65.9
Minnesota	85.7	71.5
Mississippi	82.6	70.5
New Jersey	73.5	50.8
New York	75.8	53.9
Texas	77.8	61.0
Balance of U.S.	82.1	65.4
Washington	83.3	65.3
Total	79.9	61.7

Table 5-16.
Extended and Joint Adult Response Rates, by Sample Type and Study Area

Study Area	Sample Type					
	Extended			Joint		
	Area	RDD	Total	Area	RDD	Total
Alabama	96.8%	81.4%	82.3%	84.0%	68.5%	69.4%
Balance of Wisconsin	90.0	85.2	85.2	77.3	71.1	71.2
California	83.7	74.2	74.5	69.3	52.8	53.2
Colorado	93.5	79.7	80.2	83.8	60.6	61.4
Florida	95.4	77.6	78.2	84.0	58.4	59.1
Massachusetts	95.9	77.5	77.8	67.2	55.8	56.0
Michigan	98.8	80.0	80.5	91.1	61.6	62.3
Milwaukee	95.0	80.7	81.1	81.6	65.5	65.9
Minnesota	95.8	85.4	85.7	82.1	71.2	71.5
Mississippi	95.6	80.9	82.6	84.4	68.8	70.5
New Jersey	93.2	73.1	73.5	69.3	50.4	50.8
New York	94.4	75.6	75.8	75.1	53.7	53.9
Texas	87.8	77.1	77.8	74.5	60.1	61.0
Balance of U.S.	94.0	81.5	82.1	83.8	64.7	65.4
Washington	93.5	83.0	83.3	63.5	65.4	65.3
Total	92.5	79.4	79.9	80.5	61.0	61.7

Table 5-17.
Extended and Joint Adult Response Rates, by Metropolitan Status and Study Area

Study Area	Extended			Joint		
	MSA	Non-MSA	Total	MSA	Non-MSA	Total
Alabama	80.7%	85.7%	82.3%	67.6%	73.1%	69.4%
Balance of Wisconsin	83.8	87.5	85.2	69.4	73.9	71.2
California	74.1	88.2	74.5	52.6	72.6	53.2
Colorado	79.5	83.8	80.2	60.4	66.7	61.4
Florida	77.8	84.0	78.2	58.4	69.4	59.1
Massachusetts	77.7	79.9	77.8	55.8	63.7	56.0
Michigan	79.4	86.1	80.5	60.4	72.2	62.3
Milwaukee	81.1		81.1	65.9		65.9
Minnesota	84.8	87.8	85.7	69.6	75.9	71.5
Mississippi	83.0	82.3	82.6	67.6	72.1	70.5
New Jersey	73.5		73.5	50.8		50.8
New York	75.5	79.3	75.8	52.9	66.3	53.9
Texas	76.6	85.5	77.8	59.2	71.7	61.0
Balance of U.S.	80.9	85.2	82.1	63.1	71.6	65.4
Washington	82.6	86.5	83.3	64.1	70.9	65.3
Total	78.7	85.2	79.9	59.4	71.5	61.7

Table 5-18.
Extended and Joint Adult Response Rates, by Screener Poverty Status and Study Area

Study Area	Extended				Joint			
	Screener Poverty Status				Screener Poverty Status			
	Nonpoor	Poor	Unknown	Total	Nonpoor	Poor	Unknown	Total
Alabama	82.7%	83.2%	73.7%	82.3%	69.8%	70.2%	62.1%	69.4%
Balance of Wisconsin	86.6	84.5	68.9	85.2	72.3	70.6	57.5	71.2
California	75.8	74.1	63.8	74.5	54.1	53.0	45.6	53.2
Colorado	80.8	80.8	68.6	80.2	61.9	61.9	52.5	61.4
Florida	80.2	76.8	64.4	78.2	60.6	58.0	48.7	59.1
Massachusetts	79.7	75.8	60.3	77.8	57.3	54.7	43.3	56.0
Michigan	81.8	81.6	62.2	80.5	63.4	63.4	48.1	62.3
Milwaukee	82.2	80.1	71.1	81.1	66.8	65.1	57.8	65.9
Minnesota	86.2	86.5	75.4	85.7	71.9	72.1	62.9	71.5
Mississippi	82.6	83.4	76.7	82.6	70.6	71.2	65.5	70.5
New Jersey	75.1	75.7	53.0	73.5	51.9	52.4	36.6	50.8
New York	77.5	74.8	64.1	75.8	55.2	53.2	45.6	53.9
Texas	79.1	79.6	57.8	77.8	62.0	62.4	45.3	61.0
Balance of U.S.	83.2	82.4	67.0	82.1	66.3	65.8	53.4	65.4
Washington	84.5	82.7	72.1	83.3	66.2	64.8	56.5	65.3
Total	81.2	80.2	65.1	79.9	62.6	62.0	50.2	61.7

Table 5-19.
Extended and Joint Adult Response Rates, by Type of Adult* and Study Area

Study Area	Extended			Joint		
	Type of Adult			Type of Adult		
	MKS	Non-MKS	Total	MKS	Non-MKS	Total
Alabama	84.4%	80.7%	82.3%	71.2%	68.0%	69.4%
Balance of Wisconsin	89.2	82.3	85.2	74.5	68.7	71.2
California	77.7	72.4	74.5	55.5	51.7	53.2
Colorado	82.1	79.0	80.2	62.8	60.5	61.4
Florida	82.1	75.8	78.2	62.0	57.3	59.1
Massachusetts	81.9	75.3	77.8	59.6	53.8	56.0
Michigan	83.8	78.2	80.5	65.7	60.0	62.3
Milwaukee	83.2	79.9	81.1	67.6	64.9	65.9
Minnesota	89.4	83.1	85.7	74.5	69.3	71.5
Mississippi	85.7	80.0	82.6	73.2	68.3	70.5
New Jersey	79.4	69.8	73.5	55.5	47.8	50.8
New York	80.9	72.6	75.8	57.6	51.7	53.9
Texas	82.1	74.4	77.8	64.4	58.3	61.0
Balance of U.S.	86.7	78.9	82.1	69.6	62.5	65.4
Washington	85.6	81.7	83.3	67.2	64.1	65.3
Total	84.2	77.0	79.9	65.5	59.1	61.7

* MKS are MKAs and their spouse/partner; non-MKS are all other adults.

Table 5-20.
Extended and Joint Adult RDD Response Rates, by Mailing Status and Study Area

Study Area	Extended			Joint		
	Mailing Status			Mailing Status		
	Mailed	Not Mailed	Total	Mailed	Not Mailed	Total
Alabama	84.4%	76.9%	81.4%	72.5%	62.5%	68.5%
Balance of Wisconsin	86.7	81.2	85.2	74.4	62.8	71.1
California	79.8	72.3	74.2	61.7	49.8	52.8
Colorado	83.0	77.2	79.7	66.4	56.2	60.6
Florida	82.3	73.4	77.6	65.5	51.6	58.4
Massachusetts	82.1	71.0	77.5	62.5	46.7	55.8
Michigan	84.5	74.8	80.0	68.8	53.5	61.6
Milwaukee	84.7	76.1	80.7	71.4	58.4	65.5
Minnesota	87.4	80.8	85.4	75.3	61.9	71.2
Mississippi	83.0	77.3	80.9	71.7	63.6	68.8
New Jersey	80.4	66.4	73.1	61.2	41.3	50.4
New York	79.8	70.7	75.6	60.6	45.9	53.7
Texas	82.4	73.2	77.1	67.8	54.3	60.1
Balance of U.S.	84.0	78.4	81.5	69.9	58.0	64.7
Washington	86.9	79.8	83.0	72.5	59.3	65.4
Total	83.3	75.4	79.4	67.9	53.9	61.0

Table 5-21.
Extended and Joint Adult MKA Response Rate, by Study Area

Study Area	Extended	Joint
Alabama	84.4%	71.2%
Balance of Wisconsin	89.2	74.5
California	77.6	55.4
Colorado	82.1	62.8
Florida	81.9	61.9
Massachusetts	81.8	59.5
Michigan	83.7	65.6
Milwaukee	83.2	67.6
Minnesota	89.3	74.5
Mississippi	85.6	73.1
New Jersey	79.4	55.5
New York	80.9	57.5
Texas	82.0	64.3
Balance of U.S.	86.6	69.6
Washington	85.5	67.1
Total	84.1	65.4

Table 5-22.
Extended and Joint MKA Response Rates, by Sample Type

Study Area	Sample Type					
	Extended			Joint		
	Area	RDD	Total	Area	RDD	Total
Alabama	100.0%	83.1%	84.4%	86.7%	69.9%	71.2%
Balance of Wisconsin	91.0	89.2	89.2	78.1	74.5	74.5
California	90.0	77.1	77.6	74.6	54.8	55.4
Colorado	95.1	81.5	82.1	85.2	62.0	62.8
Florida	98.1	81.3	81.9	86.4	61.1	61.9
Massachusetts	100.0	81.4	81.8	70.1	59.3	59.5
Michigan	100.0	83.1	83.7	92.2	64.8	65.6
Milwaukee	100.0	82.6	83.2	85.9	67.0	67.6
Minnesota	97.6	88.9	89.3	83.7	74.1	74.5
Mississippi	98.0	83.8	85.6	86.5	71.2	73.1
New Jersey	97.0	78.8	79.4	72.1	55.0	55.5
New York	97.0	80.6	80.9	77.2	57.2	57.5
Texas	92.1	81.2	82.0	78.1	63.3	64.3
Balance of U.S.	97.4	86.0	86.6	86.8	68.8	69.6
Washington	95.4	85.2	85.5	64.9	67.1	67.1
Total	96.1	83.5	84.1	83.6	64.7	65.4

5.3 Comparisons to Other Surveys

In this section, the response rates for the 1997 NSAF presented above are compared to the rates from other surveys. As mentioned in the discussion of the response rates, the vast majority of the population lived in telephone households so the overall weighted response rates are nearly equal to the rates from the RDD sample. Thus, the appropriate comparison group is other RDD surveys.

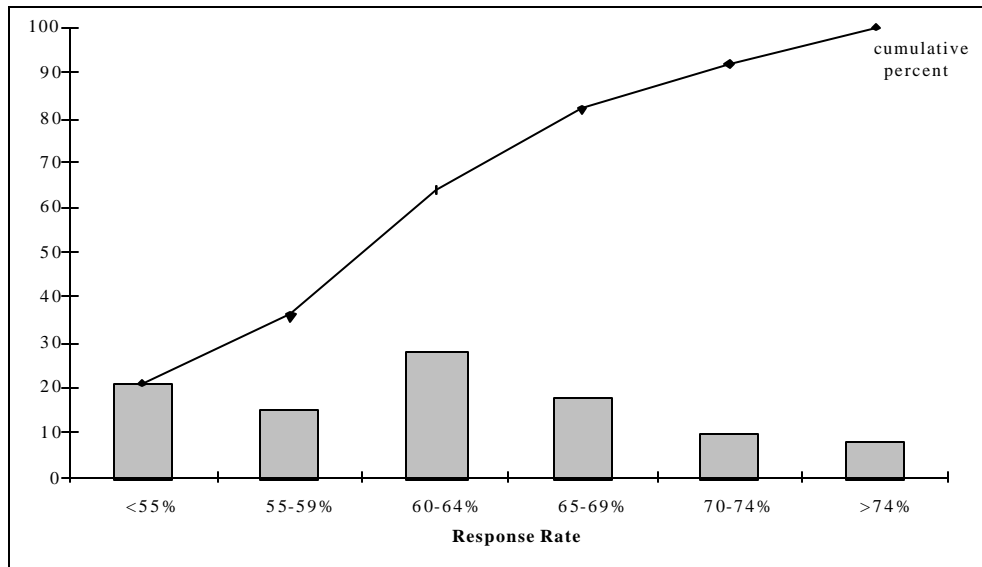
Despite the importance of response rates and the emergence of RDD as a major method for surveying households, the literature on response rates in RDD surveys is very limited. In fact, Massey et al. (1997) is the only article that gives a review of RDD response rates with any specificity.⁶ Massey et al. identified RDD surveys conducted in the U.S. from 1990 to 1995 and attempted to document the response rates for these surveys. They restricted the surveys they examined to the following:

- Surveys for government agencies or major research organizations in the U. S.;
- National surveys with at least 1,000 completed interviews;
- State or multistate surveys with 5,000 or more completed interviews; and
- Surveys that explained how response rates were computed.

Figure 5-1 shows the distribution of response rates for the 39 surveys that met their criteria. Massey et al. note that the response rates are those reported for the survey, but with no attempt to standardize definitions to make them more comparable. The mean reported response rate for the 39 RDD surveys was 62 percent with the median between 60 and 64 percent. Fewer than 20 percent of the surveys had response rates of 70 percent or higher.

⁶ A related topic is response rates for case control studies. Slattery et al. (1995) review response rates in these studies.

Figure 5-1.
Response Rates in RDD Surveys, 1990–95



Source: Massey, O'Connor, and Krotki (1997)

Because of the methods used to compute the response rates included in this review, it is very likely that the percentage of RDD surveys achieving response rates of 70 percent or more using the CASRO definition is even smaller than indicated. For example, the authors state that nearly half of the surveys in these computations excluded never-answered and answering machine-only telephone numbers in their computations of response rates.

Massey et al. (1997) concluded that “considerable effort is required to obtain a response rate over 60 percent in RDD surveys where some households are not eligible for the survey, persons within the household are subsampled, or multiple questionnaires are used.” In the 1997 NSAF, all of these conditions were met. They also noted that other factors, such as the increased use of answering machines, call forwarding, and increased telephone solicitation have all increased the burden in RDD surveys.

Another study of response rates in RDD surveys conducted by the Council for Marketing and Opinion Research (CMOR) focused on marketing surveys and is therefore less relevant. However, their findings (CMOR 1996) do provide some context for judging respondent reactions to RDD surveys. They found:

- Refusal rates are slowly but steadily increasing;
- The majority of refusals happen before the survey introduction;
- Refusal rates are higher when the length of the interview is disclosed; and
- Incentives have little impact on refusal rates.

Even though this study is not about experiences in surveys like the NSAF, the conclusions reached are consistent with many sentiments expressed by those conducting these types of surveys. Massey et al. (1997) found that most of the practitioners felt that RDD response rates were falling and refusal rates were increasing. Nearly all RDD surveys also find that refusals

occur very early in the survey and that discussing the length of the interview generally increases the refusal rate. The literature on incentives is discussed later.

The joint child response rate from the 1997 NSAF was 65 percent overall, which places it in the third quartile of the distribution given. It is also important to remember that the NSAF response rates include never-answered and answering machine telephone numbers in the denominator. If they were eliminated, the rates for the NSAF would increase by a couple of percentage points. Across the states, all of the joint child response rates are above 55 percent and four are above 70 percent.

For adults, the rates are somewhat lower, but still higher than the average rates reported by Massey et al. (1997). The joint adult response rate for the nation was 62 percent, with all the states having rates greater than 50 percent and three of the states with rates of 70 percent or higher.

As discussed in chapter 3, achieving response rates this high requires substantial effort. The next chapter discusses some of the research findings that were used to guide the efforts undertaken in the conduct of the survey.

Chapter 6.

Research and Development to Maximize Response Rates

Throughout the NSAF, staff were concerned with instituting procedures that maximized response rates. This began with the development of the screening instrument and continued throughout the field period. The research associated with these activities is described below. The first section covers the development of the screener, the second covers refusal conversion, and the third compares the two-stage and one-stage interviewing strategies.

6.1 Development of the Screener

The screening instrument had to complete several tasks. These included:

1. Finding out if there was there an eligible subject (or subjects) in the household. “Option A” households were defined as those containing at least one child between the ages zero-17. “Option B” households were those with no children under the age of 18 and at least one person that was 18 to 64 years old. “Option B” households were subsampled.
2. Finding out if the household income was above or below 200 percent of the poverty line. Those with incomes above the poverty line were subsampled, while all those below were included in the study.
3. Selecting the subject for the extended interview. This involved obtaining a listing of eligible subjects in the household. For “Option A” households, this was a list of children zero-17 years old, along with their respective ages. For the “Option B” households, this was a list of all adults age 18 to 64. Once the listing was obtained, subjects were sampled for the extended interview.
4. Identifying the most knowledgeable adult (MKA) in “Option A” households. For “Option A” households, the respondent for the extended interview was the person who knew the most about the health and education of the selected child.

This information had to be obtained with a minimal amount of nonresponse. This posed a major challenge to the survey, since these tasks involved collecting information that are sensitive to respondents. In particular, asking about income or detailed information on household composition are known to increase nonresponse (Brick et al. 1997).

The general approach taken was to screen out households as quickly as possible, try to develop rapport with the respondent before asking the most sensitive questions, and only ask for the minimal amount of information necessary. Initial development of the screener was done through a series of small pilot tests. Once the production interviewing was under way, the screener was modified, based on feedback from interviewers and observers.

Pilot Tests. To develop the screener, a series of pilot tests was conducted. These tests were used to assess the introduction, the sequencing, and the final wording of particular items. Initially, a

single screener was developed. This included a preliminary introduction, as well as the wording/sequence of the items to be included on the instrument. After this initial development phase, subsequent work concentrated on the introduction to the instrument, since this has the most influence on response rates.

These small pilot tests consisted of a series of small scale experiments (sample sizes ranging from 100 to 200 per condition). The experiments were meant to test different design principles related to the introduction, including: (1) offering an incentive to eligible respondents, (2) identification of the sponsor of the survey, (3) the amount of information provided on the importance of the study, (4) the sequence of the questions asked immediately after the introduction and (5) inclusion of a statement that explained that the call was not soliciting money.

Decisions about the “best” introduction were based on not only the comparative cooperation rates observed between different versions, but also interviewer feedback and expectations on what the project team felt would or would not work. This process was used in recognition that the statistical power of each particular experiment was very low. That is, the differences between experimental conditions had to be very large before a statistically significant difference would show up.

From these experiments, it was concluded that it was best: (1) not to offer a promised incentive of \$5, (2) to mention “private foundations” as a sponsor rather than the “Urban Institute” and/or “Child Trends,” (3) to minimize information about the content of the study at this point in the screener, (4) to begin the screener with eligibility questions rather than questions to peak respondent’s interests and (5) to include a statement about not soliciting money.

The introduction adopted as a result of this work was:

Hello, my name is (NAME) and we are preparing to do a study for private foundations interested in education, health care, and other services in (STATE). The study has been endorsed by state governments concerned with how recent changes in policies affect people’s lives. I am not asking for money — I’d only like to ask you a few brief questions.

A more detailed discussion of pretests of the screener instrument is in Chapter 2 of Telephone Survey Methods Report No. 9.

Changes to the Introduction During the Field Period. The introduction was changed several times during the field period based on comments from the interviewers and observations by project staff. The first change was based on the desire to shorten the introduction. At this point in time, interviewers had been reading the same introduction for as long as five months and it was felt that shortening the text might provide a fresh perspective. To shorten the introduction, any mention of the sponsor and the specific content of the survey was eliminated:

Hello, this is (NAME) and I am calling for the National Survey of America’s Families. We are not asking for money. This is a project that has been endorsed by

(state) to see how recent changes in federal laws affect people’s lives in your community.

This resulted in a noticeable, but temporary, bump of 2 percent to 4 percent in the initial cooperation rate.

A second change in the introduction was tested about seven months into the field period. At this point in time, a relatively high percentage of the work was refusal conversion. This change involved eliminating any mention of the state endorsement in the introduction or in the prenotification materials. Based on observations, as well as comments from the interviewers, the project staff were skeptical that the state endorsement portion of the introduction was being heard clearly by the respondents.

To test this, first refusal conversion cases were randomly assigned to two groups. One group was read a revised introduction that did not mention the state endorsements and the second group was read the introduction shown above mentioning state endorsements. This was conducted in three states where the study had received some type of endorsement (Florida, New Jersey, and New York). The results are shown in table 6-1 below. As can be seen, there was virtually no difference between the two conditions. As a result of this experiment, the state endorsement was dropped from the introduction through the end of the field period.

Table 6-1.
Refusal Conversion Rates for the Screener by Whether or Not a State Endorsement was Mentioned in the Introduction.†

State Endorsement?	Conversion Rate	N
No	53.0	1,284
Yes	53.8	1,254

† Conducted in Florida, New Jersey, and New York.

6.2 Refusal Conversion

A number of procedures were found to have an effect on converting refusers. To investigate these methods at the screener level, experiments were conducted involving the use of promised incentives, express delivery of the prenotification materials, and prepaid incentives. In addition, special procedures were used to convert respondents at the extended level, although no formal experiments were conducted.

6.2.1 Conversion of Screener Refusers

The different methods used to convert households that refused to complete the screener are discussed below.

Promised Incentives. As noted when describing the development of the screener, an experiment examining the success of a promised incentive of \$5 had no effect. Several potential problems with a promised incentive at this point in the interview are: (1) the respondent did not hear the

initial offer of money and hung up before it was read, (2) the respondent confused the offer of money with an attempt to solicit a sale or money and (3) the interviewers were not particularly comfortable with offering money at this stage in the interview.

Other research in this area (Strouse and Hall, 1997) seemed to indicate that part of the problem with the previous experiment was that more money needed to be offered. A promise of a relatively small amount of money, like \$5, may not have been enough to counteract doubts the respondent may have had about the call. In addition, the pilot experiment did not use any type of prenotification. One hypothesis was that if respondents received a letter or a message that the study was offering money prior to the call, the reaction to the offer of money might be quite different than found in the pilot experiment.

For these reasons, a second, larger, experiment was conducted while the refusal conversion methods were being developed. For a detailed description of the experiment, see Cantor et al. (1997). The experiment was conducted with 25 interviewers and a set of households that had previously refused the screener. Half of the cases were randomly assigned to an incentive condition and the other half were assigned to a “no-incentive” condition. The 25 interviewers were assigned to one of two groups. During the first half of the experiment, one group offered respondents \$25 if they agreed to complete the screening interview. The other group did not offer any incentive. Once half of the cases had been worked, the two groups of interviewers switched conditions. Group 1 worked “no-incentive” cases, while Group 2 worked the “incentive” cases. Switching between conditions was done to minimize any confusion related to erroneously offering money for a no-incentive case.

Before the experiment began, the phone numbers were matched to a list of telephone directories. Those that matched and that had an address were sent a letter prior to the first refusal conversion call. For the cases with an incentive, the letter mentioned that \$25 would be provided if the screener was completed. In addition to the letter, messages were left the first time an answering machine was encountered (not thereafter). For the incentive cases, the \$25 was mentioned in the message.

The results of the experiment are displayed in table 6-2. These provide the refusal conversion rates by the incentive and no-incentive conditions, as well as other characteristics associated with the interview. As can be seen, the offer of \$25 had no effect on the overall rate of conversion, with 27.4 percent for the incentive condition and 28.5 percent for the no-incentive condition.

One hypothesis of why the incentive did not work was that respondents did not believe the offer of money. One way the legitimacy of the offer might have been established was through attempts to prenotify the respondent about the purpose of the call. Prenotification might provide respondents some opportunity to think about the substance of the study and, hopefully, decide that the call was part of a legitimate research effort.

There was weak support for this hypothesis across the two different types of prenotification. For those that received an advance letter, the conversion rate for the incentive group was not statistically different from those in the no-incentive group. However, in those instances where a message was left, the conversion rate was about 5 percentage points higher in the incentive

condition ($t=1.28$; $p<.10$, one tailed test). When messages were not left, the opposite was the case ($t=1.78$; $p<.05$; one tailed test).

There are a number of differences between prenotification by the letter and the message machine. One is the mode of delivery. The letter was mailed using addresses from published telephone lists. These addresses are not up to date. Consequently, some proportion of the letters were not actually delivered to the address to which the telephone number corresponds. Even if the letter was to the right address, it may not have been opened or carefully read by the person who answered the phone. It may have been thrown out as “junk” mail before opening, or the person to whom it was addressed (and listed in the phone directory) may not be the person that the interviewer talked to.

Alternatively, a message left on a machine could be heard by many people in the household. The person that plays the message is forced to listen to it in order to clear the machine. There is also evidence that leaving messages distinguishes calls from those of telemarketers, who generally do not leave messages. It provides an alternative mode from the original prenotification letter to inform individuals about the study. It may not be seen, therefore, as providing redundant information and may be taken more seriously.

One final difference is the type of respondent each method reached. The letter only reached those that have an address listed in the phone book, while the message machine only reached those persons that have a machine and did not answer the phone when the interviewer critically called.

When debriefed, interviewers were evenly split on the utility of the \$25. Some interviewers felt that it provided an effective tool for converting respondents, while others provided the same feedback as in the pilot experiment — they felt that it made them sound like telemarketers trying to sell the respondent something. There were mixed feelings about when the incentive should be presented. Many interviewers felt that putting the incentive at the very beginning of the introduction exacerbated problems by sounding like a telemarketer. They felt that it was important first to establish some credibility about the purpose of the call before mentioning the money.

This qualitative information seemed to indicate that effective use of a \$25 incentive may be subject to the skills of the interviewer. Subtle differences in the delivery of the introduction may make a significant difference in whether or not the incentive is effectively used. One way this may have manifested itself would be an interaction with interviewer experience using incentives. As noted above, all of the interviewers were trained to do refusal conversion as part of the experiment. If interviewers became more confident and skilled at conversion as the field period progressed (as is normal), then the use of the incentive may have also improved.

This would have appeared as a difference between interviewers who initially started with the incentive (Group 1) and those that offered it during the second half of the experiment (Group 2). This did not seem to be the case, however. The differences in the incentive and no-incentive conditions were essentially the same, regardless of when the interviewers were using the incentive during the experiment (Group 1 vs. Group 2; data not shown).

Use of the incentives may also be subject to more intrinsic qualities related to skills that interviewers bring with them to the job. There is variability across interviewers in their abilities to obtain high cooperation rates. If these abilities are important for utilizing the \$25 to convert refusers, then one might expect that the effect would vary by interviewer quality. To test this idea, we used two measures of quality, both of which utilized data obtained during the NSAF field period. The first measure was the cooperation rate the interviewer achieved during the January to July NSAF field period.⁷ These data are not consistent with the above hypothesis. The differences between the incentive and no-incentive conditions are not statistically different across three groupings of interviewers (top third, middle third, and bottom third; data not shown).

A second way used to measure interviewer skill was to subset interviewers by whether or not they were kept on refusal conversion for the length of the NSAF field period. Looking at only those that were permanently kept on refusal conversion also does not support the hypothesis that better interviewers could more effectively use the incentive (data not shown).

There is some evidence, however, that skill does interact with prenotification on the effects of incentives. Table 6-2 provides conversion rates for calls (where a message was left by whether or not an interviewer was left on refusal conversion for the entire study.) As can be seen, the significant effect of message machines is reduced to zero for those interviewers that were eventually not kept on refusal conversion, while the effect for the best converters is still significant ($t=1.78$; $p<.05$; one tailed test). One should note, of course, that these conclusions are not based on a large number of cases or a large number of interviewers (approximately 25). These conclusions then must only be considered tentative and need further confirmation.

As a result of this experiment, the idea of using a promised incentive for screener refusal conversion was rejected.

Special Mailings and Prepaid Incentives. Four experiments were conducted to assess different methods to contact sampled households. These experiments varied the method of delivery of the advance letter (express delivery vs. first class mail), whether an incentive was included in the letter and the stage at which the treatments were applied (prenotification, first refusal conversion, second refusal conversion). This section of the report briefly summarizes the results of these experiments. See Cantor et al. (1998) for details on these experiments.

The experiments were conducted at the beginning of the NSAF field period and were used to make decisions on strategies for increasing the response rate. The interviewers participating in the experiments were regular production personnel that handled cases throughout the field period (approximately 300 interviewers were working at the time these experiments were in progress). The experiments involving refusal conversion were administered by interviewers who had been specially trained to do refusal conversion. The experimental cases were mixed in with the regular daily loads the interviewers handled on an ongoing basis. They were generally not aware

⁷ The experiment was conducted during a 4-week period in March-April of 1997. The NSAF was administering initial screeners for much of 1997.

of any special treatment that may have applied to particular cases, but were aware that some respondents may have received special treatment (e.g., an express delivery, a small incentive).

Experiment 1

The experiment at the initial contact stage included four different conditions: (1) a letter stating the purpose of the survey using first class mail, (2) a letter using express delivery, (3) a letter with \$2 using first class mail, and (4) a letter with \$5 using first class mail.

Table 6-3 displays the cooperation and response rates after the initial, the first refusal, and second refusal conversion calls for each of the four conditions. The data in this table provide some evidence that both the incentive and express delivery have significant effects on cooperation rates. At the initial stages, the monetary incentive (65.9 percent, 62.7 percent) and express delivery (63.4 percent) have the highest rates. The first class letter had the lowest rate and was significantly different from the other conditions ($p < .05$). At the initial contact, the letter with \$5 was significantly different from the \$2 condition and express delivery. However, these differences are very small and disappear after refusal conversion. The differences between the money/express delivery conditions and the letter are maintained through the final calling stages (differences of around 2.5 percent to 3.9 percent).

These results led to two conclusions relative to the design of the NSAF. First, express delivery and incentives seem to have about the same effects on response rates. This suggests that a significant number of people are opening the mail, at least looking at the material, and being persuaded to participate because of the incentive.

Second, there is no noticeable difference in the two money conditions. At least for the levels tested here, therefore, increasing the amount of money did not have an effect.

Experiment 2

Two different experiments were conducted at refusal conversion. The first was targeted to the national sample and explored combinations of express delivery and different levels of incentives. It included: (1) express delivery, (2) express delivery with \$5, and (3) express delivery with \$10. Table 6-4 provides these results for the first and second refusal conversion. Also included in this table are rates for a comparable sample of cases that were sent a first class letter at the first refusal attempt. These rates are also broken out by states with high and low response rates.

The first conversion rates show a progressive increase from 38.6 percent for a first class letter to 48.0 percent for express delivery to around 63.7 percent when both express delivery and money are used. All differences are statistically significant ($p < .05$; two tailed test). As one would expect, the differences between treatments are reduced after second refusal conversion.

These differences are quite striking from several perspectives. One is that the use of both express delivery and a \$5 incentive results in the same response rate after first conversion as the

letter condition after second conversion. A second perspective is that use of express delivery and an incentive result in a higher conversion rate than the initial cooperation rate achieved for this group. For example, the initial calls generating the experimental group resulted in a 59.6 percent cooperation rate. The remaining 40.4 percent who refused were used for the experiment. With the express delivery and incentive combination, these initial refusers cooperated at a higher rate (63.7 percent) than those on the initial call.

The treatments result in differences in the final response rate between 3.8 and 9.5 percentage points at first conversion and 2.2 percent to 5.5 percent after second conversion.

Experiment 3

The third experiment included two different conditions applied at the first refusal conversion: (1) a letter with \$5 and (2) express delivery with \$5. The entire national sample was included. For this experiment, the sample included those cases that had been waiting the longest in the refusal conversion cue. The composition of the sample for this experiment, therefore, was slightly different from what was used in the experiments reported earlier.

The sample was drawn by first stratifying by the two state groups (high cooperation vs. low cooperation). An initial examination of the sample of cases that generated these refusals found that the cooperation rate was slightly higher than was typical for a cross section of the sample, especially in those states that had low cooperation rates. This is probably indicative of different stages that the two state-group samples had been worked at the time of sampling for this experiment.

Table 6-5 provides the cumulative rates at first and second refusal conversion by state group (low cooperation vs. high cooperation). These data indicate that an incentive delivered by first class letter does significantly increase response rates. The conversion rates are significantly higher than would be expected from a simple letter. For example, the conversion for high and low states with a simple letter is 40.8 percent and 35.9 percent, respectively (see table 6-4). This compares to 57.9 percent and 48.6 percent (table 6-5).

A second observation is that the letter with \$5 seems to increase response rates above those for express delivery with no money, but less than express delivery with \$5. For the high cooperating states and combining results across experiments, this is indicated by the gradual increase of rates for first refusal conversion rate of 40.8 percent (table 6-4), 50.9 percent (table 6-4), 57.9 percent (table 6-5) and 65.3 percent (table 6-5) for the letter, express delivery, letter with \$5, and express delivery with \$5, respectively. The differences are all statistically significant.

Experiment 4

A fourth experiment tested procedures for second refusal conversion. This included four conditions: (1) first class letter with no money, (2) express delivery with no money, (3) express delivery with \$5, and (4) express delivery with \$10. Table 6-6 provides the conversion rates

achieved at second refusal conversion for each of these conditions and the implications these conversion rates have for the final response rate. As seen from these data, the express letter does not have a large effect on the conversion rates for the low response rate states (30.7 percent vs. 31.9 percent). It does have a statistically significant, although relatively small, effect for the high response rate states (28.9 percent vs. 35.4 percent; $p < .05$ two tailed test). These differences have almost no effect on the final response rates.

Sending money with an express letter, however, has a much larger effect on the conversion rates. For a prepayment of \$5, the conversion rate increases from 30.7 percent to 43.8 percent and from 28.9 percent to 47.0 percent in the low and high response rate states, respectively. This results in differences in the final response rate of around 3 percent.

There does not seem to be a difference between the two money conditions. The effect of \$5 is approximately the same as \$10.

6.2.2 Incentives at the Extended Level

As noted above, the previous experiments on promised incentives at the screener found no effect of the incentive. Promising as much as \$25 to convert refusals did not increase the response rate when compared to not promising this money. However, a strong effect was found for prepaying respondents a much smaller amount. For this reason, the study procedures instituted a prepaid incentive for the extended interview respondents. While this only included those with listed telephone numbers, it was a logical extension to the results found at the screener level. In addition to prepaying extended refusers, a promised incentive was also instituted very late in the field period. This consisted of promising \$25 to respondents who had refused to do the extended interview to complete the interview. In this section, we briefly discuss results related to each of these procedures.

Prepaying Refusers of the Extended Interview. No experiments were conducted during Cycle 1 at the extended interview level. Most respondents with a listed address received an express package with a \$5 incentive or an express package at some point in the refusal conversion process. The timing of the package varied by what had been done when completing the screener. Those that received money when completing the screener received money at the point of the second refusal conversion. Those that did not receive money at the screener were prepaid \$5 when first refusing.

In planning Cycle 2, it was assumed that the effectiveness of the treatments applied to the extended interviews is comparable to those used at the screener. This assumption, however, is not based on experimental evidence. Of particular note is that there is no cross section of the sample that was not treated in some special way. In addition, the treatments applied were systematically related to type of interview and what happened during the screener. Consequently, there are no clear ways to estimate the effects of the treatments at the extended level. Nonetheless, one can get a sense of the effects by comparing refusal conversion rates for different groups that received and/or did not receive the treatments at different stages. Perhaps in this regard, the most useful comparison is between listed and unlisted telephone numbers. The

unlisted telephone numbers did not receive any treatment at all, except at the very end of the field period when a promised incentive was instituted. While clearly listed and unlisted telephone numbers do not represent the same mix of respondents, the effect of these differences on refusal conversion rates is not likely to be as great as it is on the overall response rate.

This comparison indicates that the treatments were effective in comparable ways to payment and express mailings done at the screener level. At first refusal conversion, for example, the conversion rate for unlisted telephone numbers was 23 percent compared to 37 percent for listed numbers. This 14 percent difference is comparable to an 18 percent difference in conversion rates for listed and unlisted screeners.

A second comparison can be made between first conversion rates for respondents that received an express package with \$5, an express package with no money, and a letter with no money. This is not an experimental comparison, since these three groups were systematically assigned to a treatment by what occurred at the screener. Despite this limitation, they serve as another piece of information that can be used to evaluate the effectiveness of the treatments. The first conversion rates across these groups were 47 percent, 24 percent, and 19 percent, respectively. These are lower in absolute level than these treatments for the screener. Nonetheless, at least the express package with \$5 seemed particularly effective.

Promised Incentives at the Extended Level. As noted above, promised incentives were also instituted at the end of the field period during second refusal conversion. When implementing this procedure, interviewers reported the incentive to be very effective in convincing the respondent that the interview was important and that their time was appreciated. This contrasts with a promised incentive at the screener level, where interviewers felt they could not clearly convey this message. Evidence of a positive effect of a promised incentive at the extended interview was supported by a boost of approximately 11 percentage points (39 percent vs. 50 percent) in the conversion rate during the final three weeks of the field period.

We believe that most of the difference between the screener and extended levels relates to the level of communication that is going on between the interviewer and respondent at each stage. The screener is a “cold call” and the interviewer does not know the respondent’s name. The respondent is not listening closely to the interviewer and, in fact, is likely to believe that the interviewer is a telemarketer. At the extended level, the interviewer has completed a screener in the household and has a good chance of knowing the respondent’s name. The respondent is listening more attentively and may not be as suspicious about the purpose of the call.

6.3 Version 1 and Version 2 Screeners

The screener was implemented under two different procedures. The first procedure, hereafter labeled “Version 1,” consisted of two stages. Between January and the middle of February, interviewers administered the screener to find eligible respondents. These eligible respondents were then called back after the middle of February to complete the extended interview. When calling back, the interviewers asked to speak to the extended respondent, verified that the screener information was still correct, and then proceeded to complete the extended interview. If

the screener information was not correct, the screener was readministered and a new respondent was selected (if still eligible).

The Version 2 procedure consisted of one stage. After mid-February, the interviewer called the household to complete the screener. If an eligible respondent was found, an attempt was made to complete the extended interview on the same call.

The Version 2 procedure is the more traditional approach. Common survey practice is to attempt the extended interview on the same phone call as when completing the screener. It is based on the “foot in the door” principle. That is, once the interviewer has a cooperating respondent on the telephone, he/she pushes the contact as far as possible. It is typically assumed that once a respondent hangs up, nonresponse will occur because an interviewer has to gain cooperation from someone in the household a second time. The respondent may not answer the telephone again or he/she may change his/her mind when called back.

The reason the Version 1 procedure was implemented at the beginning of the field was a combination of schedule and data quality reasons. It was important to begin the screening as soon as possible, given the desire to get out of the field as quickly as possible. However, it was also desirable to delay the beginning of the extended interview until respondents had time to receive income tax information (e.g., W-2 forms) for the previous tax year (1996). For this reason, the survey did not begin the extended interview until mid-February.

Analysis of the cooperation and response rates between the two procedures found that, contrary to expectations, the Version 1 procedure did not lead to lower response rates. In fact, there is some evidence that it may have led to higher screener response rates. The comparison is complicated by the fact that the two procedures were introduced at two different times. At the very least, it is necessary to control for differences in procedures and personnel involved in the survey at each time point. This is difficult, at best, since the better personnel were assigned the most difficult cases once refusal conversion started.

This is illustrated in table 6-7, which provides cooperation and rates after subsetting the data to control for several differences in the procedures. One important consideration is that the Version 1 procedure was only implemented among those households that were resolved prior to mid-February. Refusal conversion did not begin until early March. Consequently, the more difficult cases were not worked until after the Version 2 procedure had been implemented. To control for this, the Version 1 data displayed in table 6-7 represent all those cases in the first five release groups that were initially resolved⁸ as either a complete or refusal under this procedure. This represents between 78 percent and 85 percent of the cases initially resolved as complete or refusal for these release groups. The data for the Version 2 procedure are taken from three groups that were released after the Version 2 procedure began. Within these three release groups, the first 80 percent that were a complete or refusal on the initial resolution were examined. By subsetting the data this way, we are attempting to control for the fact that the

⁸ Cases are “initially resolved” if they were coded as a complete or refusal at first contact with the household. This excludes all cases where an individual was contacted but there was no resolution (e.g., call back), messages were left on an answering machine, and all of the “no contacts” (e.g., ring with no answer; nonworking numbers).

Version 1 procedure did not represent a cross section of the cases, but only those cases that were contacted prior to mid-February.

A second complication in the analysis is that the two procedures were completed by different sets of interviewers. The implementation of Version 2 in mid-February coincided with an influx of interviewers that were trained to do the extended interview. If the interviewers working during the early part of the field period were significantly different than those hired in mid-February, then the rates across the two versions are not entirely comparable. Table 6-7 controls for this in the last column by subsetting the Version 2 data further by only including those cases that were initially resolved by interviewers who were working during the first part of the field period.

As can be seen from table 6-7, there are differences in the cooperation rates between the two procedures. At the screener level, the difference is 6.6 percent (60.5 percent vs. 53.9 percent). Controlling for the differences in the composition of the interviewers does not change this. This difference is reduced when verification, in the Version 1 screener is considered. This reduces the Version 1 screener rate to 58.7 percent. After refusal conversion, the difference is further reduced to 2.3 percentage points. The differences are larger at the extended level, where the Version 1 response rate was 86.7 percent compared to 80.3 percent for Version 2. Analysis not shown here found that the differences at the extended level are largest for those cases where the screener and extended respondent were not the same person (Cunningham et. al. 1998). This analysis, however, was only able to examine rates for adult-only households.

As noted above, this is contrary to what was expected when implementing the study. We were expecting that after verification, the screener cooperation rates would have been lower for Version 1. One explanation for the difference is that the Version 1 procedure simplified the task for the interviewer at both the refusal conversion and extended stages. At the screener, the interviewer only had to convince the respondent to complete a three- to five-minute interview, without having to worry about whether the household would be selected for an extended interview. At the extended level, the interviewer was calling a household that had already cooperated on the screener and some rapport had been built (e.g., the interviewer could refer to the screener and, in most cases, had the respondent's name).

A second explanation for the higher rates at the extended level is a procedure implemented between the first stage (screener) and second (verification and extended) stages of the process. After the Version 1 screener was completed, the interviewer asked the respondent if he/she would like to receive more information about the study. If so, a letter and study brochure was sent to the respondent prior to contacting them for the extended interview. This may have had an effect on the extended level response rates.⁹

The differences shown in table 6-7 are, in part, an artifact of the way the Version 1 procedure was implemented. Because the gap between the screener and extended interview was relatively

⁹ As a result of this analysis, the NSAF changed the way the survey handled cases where the screener and extended respondent differed. Under this new procedure, whenever there was a switch in the respondent, the interviewer asked if the respondent would like to get more information about the survey. If so, a letter was sent out with a small incentive (\$5). Analysis of this procedure indicated that it did not boost the extended response rates.

long (e.g., one to two months), the screener was not considered complete until verification at the second stage was completed. This rule was instituted because the time period was long enough that real changes could have occurred between the first and second stages. For purposes of computing a response rate for Cycle 1, therefore, the refusals at verification are in the denominator of the screener response rate. However, from the interviewer's point of view, verification is inextricably linked to trying to complete an extended interview. During the verification call, the interviewer asked to speak to the extended respondent. The interviewer was oriented toward convincing respondents to do the extended interview. For understanding the effects of the two-stage procedure, therefore, this would argue for including verification in the extended interview response rate. Furthermore, the gap between the screener and extended interviews for a two-stage procedure could be much closer in time (perhaps even within a few minutes). For such a procedure, refusals at the second stage would be counted at the extended level, since there would be very little chance that the composition of the household would change.

For both of these reasons, it is more instructive to recompute the response rates displayed in table 6-7 with the cases refused at verification counted at the extended level. These data are shown in table 6-8. As can be seen, the differences are greatly reduced. At the extended level, in fact, Version 1 has a lower cooperation rate than Version 2 (85.6 percent vs. 87.1 percent). The differences in the screener cooperation rates are increased slightly (84.6 percent vs. 80.8 percent). Taken at face value, this would seem to indicate that any gain in response rate due to the Version 1 procedure was realized at the screener. That is, by having interviewers that only worked on the screener task, there seems to be a slight boost in the screener response rate. However, this gain is partially offset by forestalling refusals at the extended level. That is, a significant number of those that completed the screener for Version 1 eventually refused at the extended level. The final result is a relatively small difference in the joint cooperation rate (screener x extended).

Part of the "cost" of the Version 1 procedure is that households that cannot be contacted after initial resolution are lost to the study (a respondent refuses to do the extended interview is called back but can never be reached again) The cooperation rates displayed above exclude these households from the denominator. The response rate, however, counts these as nonresponse. As seen from Table 6-8, once looking at response rates, the difference for the extended interview is increased (74.8 percent vs. 80.3 percent).

The above analysis is based on a number of assumptions about the equivalence of the conditions under which the two procedures were administered. As noted above, there were many more interviewers involved in the Version 2 process, since this was when the extended interview actually started. In addition, refusal conversion started shortly after the implementation of the extended interview. This essentially weights much of the Version 2 data with interviewers who were not part of the refusal conversion effort. While subsetting to Version 1 interviewers controls for this somewhat, it does not control for the relative contribution refusal conversion and nonrefusal conversion interviewers made. While some of this variation could be controlled through more complicated, multivariate analysis, but it could never fully capture the complicated assignment process of individual cases to particular interviewers.

A disadvantage of the Version 1 procedure is that it is more expensive to implement because it requires more calls to the household. Whereas the Version 2 procedure has the potential of completing both the screener and extended interview in a single call, the Version 1 procedure requires at least two calls to complete both the screener and extended interview. Analysis of the amount of time to complete the case through the extended interview found that, on average, the Version 1 procedure adds approximately 10 - 15 minutes per completed extended interview. This includes not only the time to actually administer the verification questions, but also the amount of interviewer time needed to recontact the household to conduct the verification/extended interview.

6.4 Summary

As shown in Chapter 5, the 1997 NSAF data collection efforts resulted in response rates that were higher than those typical of this type of survey. These efforts were informed by a research program that studied ways of constructing screening instruments that achieved the goals of the survey while maximizing response rates. These research efforts also examined different types of treatments that could be used to encourage the participation of sampled households and persons. The research directed at improving response rates were evaluated and those that were promising were implemented during the survey. These methods also provide a solid empirical framework for future data collection efforts.

**Table 6-2.
Results of Promised Incentives by Stage of Offer**

	Percent Converted*	
	Incentive	No Incentive
Total	27.4% (1,019)	28.5% (1,034)
Advance letter	27.7 (495)	31.1 (486)
No advance letter	27.1 (524)	26.3 (548)
Left message	35.0 (329)	30.3 (277)
Never left message	23.8 (690)	27.9 (757)
Left message and interviewer was:		
Left on conversion	39.0 (197)	30.1 (143)
Not left on conversion	29.1 (134)	30.6 (134)

*Sample size in parentheses.

Table 6-3.
Cumulative Cooperation and Response Rates* After Initial Contact, First Refusal Conversion and Second Refusal Conversion by Condition at Initial Contact†

	Experimental Condition at Initial Contact			
	First Class Letter	Express Delivery	First Class Letter and \$2	First Class Letter and \$5
Initial contact				
Cooperation	58.8%	63.4%	62.7%	65.9%
Response rate	56.6	61.0	61.1	63.4
First refusal conversion				
Cooperation	73.3	77.3	76.2	77.2
Response rate	70.5	74.2	74.0	73.9
Second refusal				
Cooperation	79.9	83.5	82.1	82.3
Response rate	76.6	80.1	79.7	78.7
Sample size	1,679	1,677	1,674	1,671

* Cooperation rate = $C/(C+R)$

Response rate = $C/(C+R+.27NA+.6M + ONR)$ where C=complete, R=refusal, NA=no answer, M=message machine, ONR=other nonresponse

† Sample is for the 6 states with the lowest cooperation rates

**Table 6-4.
Cumulative Conversion and Projected Response Rates First and Second Refusal
Conversion by Condition at First Refusal Conversion and State Group**

	Letter No Money	Express Delivery	Express Delivery and \$5	Express Delivery and \$10
Low states†				
First conversion				
Conversion rate	35.9%	44.3%	59.7%	59.1%
Projected response rate	69.3	72.7	78.9	78.8
Second conversion				
Conversion rate *	55.6	60.2	69.3	69.4
Projected response rate	77.8	79.4	83.4	82.6
Sample size	381	406	406	404
High states†				
First conversion				
Conversion rate	40.8	50.9	66.7	67.8
Projected response rate	77.0	80.4	85.6	86.2
Second conversion *				
Conversion rate	57.9	62.3	73.3	77.4
Projected response rate	83.1	84.9	88.1	89.4
Sample size	385	533	534	536
Total				
First conversion				
Conversion rate	38.6	48.0	63.7	63.7
Projected response rate	73.8	77.6	83.1	83.3
Second conversion				
Conversion rate *	57.1	62.1	71.9	74.0
Projected response rate	81.0	83.2	86.5	86.8
Sample size	817	998	998	999

† “Low states” = 6 states with the lowest cooperation rates; “High states” = 6 states with the highest cooperation rates and the balance of the nation; “Total” = includes all 13 states, the selected city and the balance of the nation. The total will not add exactly to the sum of the two state groups because of the inclusion of the selected cities.

* This includes the completes obtained at first refusal conversion

Table 6-5.
Cumulative Refusal Conversion Rates* for Letter with \$5 and Express Delivery
with \$5 by State Group

	Letter and \$5	Express Delivery and \$5
Low states		
First refusal conversion	48.6%	50.8%
Second refusal conversion	61.8	62.8
Sample size	750	736
High states		
First refusal conversion	57.9	65.3
Second refusal conversion	70.6	73.9
Sample size	743	740

* Sample consisted of the oldest refusals within each state group.

Table 6-6.
Second Refusal Conversion Rates and Projected Response Rates by Condition at Second
Refusal Conversion and State Group

	Letter No Money	Express Delivery	Express Delivery and \$5	Express Delivery and \$10
Low states†				
Second conversion				
Conversion rate*	30.7%	31.9%	43.8%	43.6%
Projected response rate	77.8	78.1	81.6	80.6
Sample size	381	378	369	367
High states†				
Second conversion*				
Conversion rate	28.9	35.4	47.0	54.2
Projected response rate	83.1	84.4	86.6	87.9
Sample size	385	382	381	379
Total				
Second conversion				
Conversion rate*	30.1	33.2	45.5	48.6
Projected response rate	81.0	81.7	84.1	84.7
Sample size	817	811	799	797

† “Low states” = 6 states with the lowest cooperation rates; “High states” = 6 states with the highest cooperation rates and the balance of the nation; “Total” = includes all 13 states, the selected city and the balance of the nation. The total will not add exactly to the sum of the two state groups because of the inclusion of the selected cities.

* This includes the completes obtained at first refusal conversion

Table 6-7.
Cooperation and Response Rates by Interview Type, Screener Version, Stage of Process, and Interviewer Mix when Including Verification in the Screener

Screener			
	Version 2††		
	Version 1†	All Interviewers	Version 1 Interviewers
Cooperation Rates			
Initial	60.5% (74,270)	53.9% (48,404)	54.4% (29,513)
After verification	58.7 (73,137)	-	-
After first refusal conversion	76.1 (71,032)	74.7 (46,981)	74.9 (28,644)
After second refusal conversion	83.1 (69,920)	80.8 (46,346)	80.8 (28,279)
Response Rates			
After first refusal conversion	75.7 (71,428)	73.4 (47,793)	73.7 (29,109)
After second refusal conversion	82.5 (70,403)	79.3 (47,195)	79.5 (28,763)

Extended Interview			
Response Rates			
Initial	80.3% (12,595)	70.7% (7,794)	-
After first refusal conversion	85.1 (12,595)	78.6 (7,794)	-
After second refusal conversion	86.7 (12,595)	80.3 (7,794)	-

† Cases from first five release groups that were resolved as a complete or refusal during the first 1.5 months of the field period.
 †† Cases are restricted to: 3 release groups that were released 1.5 months into the field period (after Version 2 started), and were first 80 percent of cases that were either completes or refusals in the initial contact.

Table 6-8.
Cooperation and Response Rates by Interview Type, Screener Version, Stage of Process,
and Interviewer Mix when Including Verification at Extended Interview

Screener			
	Version 2^{††}		
	Version 1[†]	All Interviewers	Version 1 interviewers
Cooperation Rates			
Initial	60.5% (74,270)	53.9% (48,404)	54.4% (29,513)
After first refusal conversion	77.7 (72,165)	74.7 (46,981)	74.9 (28,644)
After second refusal conversion	84.6 (71,058)	80.8 (46,346)	80.8 (28,279)
Response Rates			
After first refusal conversion	77.6 (72,211)	73.4 (47,793)	73.7 (39,830)
After second refusal conversion	84.5 (71,140)	79.3 (47,195)	79.5 (33,517)

Extended Interview			
Cooperation Rates			
Initial	78.0% (12,966)	75.2% (7,328)	- -
After first refusal conversion	85.6 (12,758)	87.1 (7,183)	- -
Response Rates			
Initial	69.3 (14,598)	70.7 (7,794)	-
After second refusal conversion	74.8 (14,598)	80.3 (7,794)	-

† Cases from first five release groups that were resolved as a complete or refusal during the first 1.5 months of the field period

†† Cases are restricted to: 3 release groups that were released 1.5 months into the field period (after Version 2 started), and were first 83 percent of cases that were either completes or refusals in the initial contact.

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