

**SRBI METHODOLOGY: New Jersey Family Health Study (RFP # 0-10-12-11)**

**Submitted to: The Center for State Health Policy – Rutgers the State University of New Jersey**

This document describes the procedures SRBI employed in the conduct of the New Jersey Family Health Study. Appended is a copy of the interviewer training outline which serves as documentation of how questions and situations, not covered with on-screen instructions, were handled. (Attachment E)

Sample

Design:

RFP specifications assigned all of the counties within New Jersey to one of five geographic regions.

Region 1: Counties of Cape May, Cumberland, Salem, and Atlantic.

Region 2: Counties of Gloucester, Camden, and Burlington.

Region 3: Counties of Ocean, Monmouth, and Middlesex.

Region 4: Counties of Mercer, Somerset, Morris, Hunterdon, Warren and Sussex.

Region 5: Counties of Passaic, Bergen, Union, Essex, and Hudson.

Within each region, households were stratified into elderly (at least one person in the household 65 years of age or older) and non-elderly. Elderly households were stratified as those with at least one family member 75 years of age or older, or not. Within non-elderly households, total yearly household income and number of household members determined which of three income categories households fell. Income categories were based on federal poverty level percentages as shown on the following chart. Income amounts were rounded off to facilitate ease of question administration and respondent comprehension.

Annual Household Income to be considered:

<u>HH Size</u>	<u>&lt;200% FPL</u>	<u>200-349</u>	<u>350+</u>
1	< \$17k	\$17k to \$30k	> \$30k
2	< \$23k	\$23k to \$41k	> \$41k
3	< \$29k	\$29k to \$51k	> \$51k
4	< \$35k	\$35k to \$62k	> \$62k
5	< \$41k	\$41k to \$72k	> \$72k
6	< \$47k	\$47k to \$83k	> \$83k
7	< \$53k	\$53k to \$93k	> \$93k
8	< \$59k	\$59k to \$104k	> \$104k
9	< \$66k	\$66k to \$114k	> \$114k
10	< \$72k	\$72k to \$125k	> \$125k
11	< \$78k	\$78k to \$135k	> \$135k
12	< \$84k	\$84k to \$146k	> \$146k
13	< \$90k	\$90k to \$156k	> \$156k
14	< \$96k	\$96k to \$167k	> \$167k
15	< \$102k	\$102k to \$178k	> \$178k
16	< \$108k	\$108k to \$188k	> \$188k
17	< \$114k	\$114k to \$199k	> \$199k
18	< \$120k	\$120k to \$209k	> \$209k
19	< \$126k	\$126k to \$220k	> \$220k
20	< \$132k	\$132k to \$230k	> \$230k
21	< \$138k	\$138k to \$241k	> \$241k
22	< \$144k	\$144k to \$251k	> \$251k
23	< \$150k	\$150k to \$262k	> \$262k
24	< \$156k	\$156k to \$272k	> \$272k
25	< \$162k	\$162k to \$283k	> \$283k
26	< \$168k	\$168k to \$293k	> \$293k
27	< \$174k	\$174k to \$304k	> \$304k
28	< \$180k	\$180k to \$315k	> \$315k

CSHP required disproportionate distributions of elderly/non-elderly households, and within non-elderly households disproportionate sample sizes by household income. At the start of the project SRBI used the available 1999 CPS data to assess the difference in the distribution of age and income variables in the actual population versus the distribution needed for sample size. The projected incidence and actual incidence of the smallest cell, households in the <200% FPL category was lower than anticipated. This resulted in a reduction of interviews conducted in that cell. Statewide SRBI found 8.10% of households <200 % of federal poverty level as opposed to 17.4% originally projected.

Attachment A details assigned sample sizes and actual household distribution based on all households successfully screened by telephone. Some households were later screened with a mail questionnaire. Those results have not been added to the telephone contact data but a disposition of the mailing results appears later in this

document. The term “screened” refers to each household where all eligibility and quota cell assignment questions were answered by the individual most knowledgeable about the health insurance needs of the household. Conversations in which a respondent refused to answer one or more, in this set of questions, were not considered successful.

#### Sample Selection Process:

RDD samples were drawn by region with each county’s population being represented proportionately to its share of the region’s total population. (A detailed description of SRBI’s RDD sampling procedures is contained in the initial proposal.) Within each region, sample was then systematically sorted into replications consisting of 40 numbers each. Each replication within a region was then assigned a replicate number beginning with “1”.

Once all regions were pulled and further stratified into replications, replication “1” from each region was combined to form a 5-region replicate of 200 numbers. In this manner, SRBI added replicates of 200 numbers as needed. Controlling the amount of telephone numbers in field maximized contact and response rates, controlled for correct geographic representation, and insured telephone numbers were dialed simultaneously in all regions. (Two exceptions were later instituted in order to enhance response rate. They are discussed in the response rate section.) Throughout the field process the proportion of numbers from each county was proportionate to the region’s total population.

#### Sample Management:

SRBI used the Quancept CATI software for the administration of this study. The system’s sampling module managed the distribution and record keeping of the sample. Throughout the field process, SRBI’s project management team conducted careful analyses of dialing results, time of day and day of week results and “at home” rates at the region level. All telephone numbers were automatically dialed by the system to insure there were no interviewer misdials. Our predictive dialer was used to pre-identify not-in-service and disconnected numbers.

Project specifications called for a maximum of 20 dialing attempts to be made to each number. (Ten dialing attempts were made to reach a household member. An additional ten dialing attempts were made to speak to the correct respondent once a household member was reached.) To maximize household contact, attempts were stratified over day of week and time of day including weekends, week-nights and business day hours. Additional dialing attempts were made to many numbers as part of our effort to enhance response rate.

- Older replications were reopened months later for (an) additional dialing attempt(s).
- Numbers with multiple callback appointments where re-tried additional times.

- Numbers which had several dialing attempts clustered around a holiday weekend were given additional attempts after the holiday.

The dialing algorithm established for this project at project start was as follows. The criteria were followed throughout the course of the project with little modification.

- If a number has been attempted 8 times and not one of those attempts resulted in a callback appointment, the 9<sup>th</sup> attempt will be made during weekday business hours. If the result is still a no answer, busy or answering machine the 10<sup>th</sup> attempt will also be made on a different business day during a different business hour.
- If after 10 dialing attempts all dialing results have been a “no answer” it will appear on the disposition as a “possible unassigned” number.
- If a number is dialed ten times and at least one of the results was a busy or answering machine, the number will be retired and appear on the disposition according to the most recent dialing result. These numbers will be redialed later in the field phase if response rate goals warrant it.
- Once a number has achieved a callback status we will allow ten additional dialing attempts to that number regardless of the number of contacts already made. After ten attempts if the household hasn’t been contacted it will appear as a callback in the disposition. The numbers will be redialed later in the field phase if response rate goals warrant it.
- Refusals will be re-contacted for refusal conversion one month after the initial refusal event.
- All no answers, busy and answering machines will be circulated every 73 hours while there are sufficient amounts of sample to hold the required field hours. When sample totals are depleted, sample can be re-circulated in a shorter time frame, but additional dialing attempts will probably be added in order to meet response rate goals.
- The sampling module will count answering machine dispositions. Every time three simultaneous answering machine dispositions have been recorded, the interviewer will receive an on-screen message to leave a short message on the answering machine.

## Data Gathering/Interviewing

### Field Dates:

- Three pre-tests were conducted. Interviewers were given a comprehensive training, which was later duplicated for the main project training. This included purpose of the survey, description of household, complete explanation of all terms and questionnaire sections and a thorough read of the entire questionnaire utilizing a mock household situation. Project training sessions lasted four hours each.
- Pretests were conducted on June 11, 2001 to June 13, 2001, June 25, 2001 to June 27, 2001 and July 9, 2001 to July 11, 2001. A total of 45 interviews were conducted among the three pre-test versions. All pretests were conducted from our centralized telephone facility in West Long Branch, New Jersey.
- All interviews for the actual study were conducted from our centralized telephone facility in West Long Branch, New Jersey. Telephone interviews were conducted from July 20, 2001 to December 31, 2001.
- Between January 31, 2002 and February 8, 2002 SRBI mailed 1,236 screening questionnaires to telephone non-responder households (n=659) and households who refused to participate when contacted by telephone (n=577). Addresses were obtained by matching the RDD telephone number to reverse directory listings. Obviously, only those records for which we could obtain mailing information were included.

A disposition of this mailing event is:

<b>Total Mailed:</b>	<b><u>1236</u></b>	<b><u>100.0%</u></b>
Records with no disposition:	659	53.3%
Records returned undeliverable:	117	9.5%
 <b><u>Total Returned</u></b>	 <b><u>460</u></b>	 <b><u>37.2%</u></b>
Refused to participate	46	3.7%
Returned an incomplete form	46	2.7%
Completed screening questions:	<b><u>368</u></b>	<b><u>29.8%</u></b>
Quota out, qualified cell completed	356	28.8%
Qualified for <250 quota cell	12	1.0%

- Between April 25, 2002 and May 19, 2002 SRBI redialed probable unassigned numbers.

## Response Rates

SRBI employed a number of procedures that contributed significantly to obtaining a response rate of 59.3% overall.

- Interviewers were evaluated on a daily basis for a balance of acceptable production rate (number of interviews conducted in a measured time period) and response rate. Counseling was provided as required in order to maintain the correct balance.
- Interviewers were trained to listen to respondent's tone and words during the introductory conversation in order to recognize and address their concerns regarding participation, and try to dispel these concerns and objections before they were stated by the respondent. Aside from respondents who automatically assumed we were a telemarketing firm, most often the objection was the inconvenience of the call at that particular time, and we were often able to successfully reschedule.
- Refusal conversion attempts were made to all respondents who refused to be interviewed or terminated an interview before it was completed. (In order to be counted as a completed interview, all appropriate questions according to skip patterns, had to be asked.) Refusal conversion attempts were made approximately one month after the refusal event to place as much distance as possible between the two events. In the interim it was hoped that the respondent's frame of mind, or personal situation, may have changed, enabling them to be more agreeable to participating in a long telephone conversation.

Refusal conversion was hugely successful. Out of 1,986 refusals attempted for conversion, 757 (38%) were converted to completed contacts.

- In November of 2001, SRBI mailed 542 letters to respondents who had refused a second time during the refusal conversion process. Attachment B is a copy of the letter sent to this population. Included in this letter was \$5.00. This amount equaled the incentive payment paid to all respondents who completed the screening section of the interview. SRBI was able to convert 236 (45%) of these households to a completed contact. Telephone calls were made approximately five days after the initial mailing and were dialed for a total of 5 additional attempts stratified over day of week and time of day. Callback appointments were followed on an almost unlimited basis for a period of about four weeks before being abandoned. Mailing addresses were obtained by matching the RDD telephone number to electronic reverse directories. Only those that matched with an address were mailed.

- Earlier in this report it was stated that during the course of the project SRBI altered the control mechanism which insured every region was dialed equally during each shift. SRBI studied and reported response rates by interviewer, day of week and by region. Tracking day of week produced interesting results.

All regions of New Jersey did relatively well on Monday, Tuesday, Wednesday, Saturday and Sunday evenings when we measured the percentage of households spoken to that resulted in being a completed contact (screen out, quota out or completed interview.)

Thursday evenings were a disaster for all regions in the state. Whereas 68% of the conversations held on a Monday evening in Region 3 would be completed contacts, less than 40% of the conversations held on Thursday evening achieved that status. This was consistent with every region. It is unexplainable. Part of it might be the last weekday evening before a work day, or we can venture NBC's "Must See TV" night is a success. Regardless, SRBI controlled the amount of interviewer hours devoted to this project each Thursday evening. All Thursday evening callback appointments were honored and all sample had a limited number of dialing attempts on a Thursday evening to be sure we contacted those people who were most available on Thursday evening. No additional dialing activity, including refusal conversion, was conducted on Thursday evenings.

Friday evening shifts produced very poor results in Regions 1 and 4. Therefore in these two regions the same type of control was employed as was used on Thursday evenings.

- The numbers of households with telephone lines for purposes other than voice communication are growing. This poses a particular dilemma in reporting accurate response rates. Over the years various formulas and calculations have been employed by many researchers in an effort to identify this proportion of numbers that appear to be "live," but which will never be answered by a person. Additionally, non-working numbers aren't always identified by a recording or automatic telephone company device.

SRBI used a careful and conservative approach to identify this population. Our formula has been accepted by federal government agencies. When a telephone number, dialed over different days of the week and times of day, was consistently "no answer" it was set aside as a possible unassigned number. For the purposes of labeling, an unassigned number means it probably is either non-working or not assigned as a voice line. Before reporting them as probably unassigned, SRBI redialed all of them again from 4/15/02 to 5/19/02; at least 4 ½ months since they were last attempted.

Numbers which had some other type of disposition in the April-May redial were assigned according to that disposition. It is possible that numbers which were

unassigned in December were newly assigned between December and April, but we did not make a differentiation or determination.

Only those numbers that were still only “no answers” for 5 additional dialing attempts were reported as probably unassigned numbers on the disposition form. This accounted for just about 1 ½ % of the total numbers attempted. SRBI has a high degree of confidence that this is the correct disposition for this group of RDD numbers as of May 19, 2002.

### Sample Disposition

The final sample disposition by region and in total is included as Attachment C. Explanation of disposition labels are as follows:

Total RDD Numbers Generated = Total number of RDD numbers generated and dialed.

Non-working/disconnect numbers = Telephone company recording of same.

Probably unassigned numbers = Explained earlier in response rate section.

Out of range: All of these numbers were excluded from the calculation of response rate because they were not within the approved sample frame of the project.

Fax/modem lines: Identified by signal received.

Business numbers: Identified by respondent answering or by content of answering machine/voice mail.

Don't know/cannot estimate household income: Households where income information for other adult members wasn't know nor could it accurately estimated. This does not include those respondents who refused household income.

Cell phones: Identified by the person answering the phone.

Language barriers other than Spanish: Identified by the person answering the phone.

Child only lines: Identified by the person answering the phone and confirming an adult will not accept a call at that number.

No answer: Last status of the call was a “no answer” and that number was never a refusal, terminate or in callback status.

Busy: Last status of the call was a “busy” and that number was never a refusal, terminate or in callback status.

Answering machine: Last status of the call was an “answering machine” and that number was never a refusal, terminate, or in callback status.

Callback: At one time a household member was reached and a callback appointment was made to contact the correct/another household member. All the numbers in this category have not had a final disposition. The actual final dialing result could have been a no answer, busy, or answering machine. The actual final dialing result will not have been a refusal or terminate.

Hearing problems: Either the respondent or a household member who answered the



phone had sufficient hearing difficulty that a conversation could not be conducted.

Long term health problems: The qualified respondent had serious or long term health problems that rendered them incapable of participating in a lengthy telephone questionnaire.

Away for duration of field period: The qualified respondent was out of the area until after December 31, 2001.

Refusals: All refusals which occurred before the first question could be administered and answered.

Mid-interview terminates: All conversations which were terminated by the respondent after the response to Q.1 was asked and recorded. In some cases this includes interviews which were interrupted and SRBI was asked to callback and complete; but the respondent was never again reachable.

Non eligible – seasonal resident: Lives in New Jersey less than four months a year.

Head of household under 18 years of age: Heads of households identified as 16 or 17 years of age.

Quota out – cell completed: Eventually all cells were completed except <200% FPL in all regions.

Completed interview: All appropriate questions were asked and responded to and the interview contributed towards the overall quota.

Cooperation rate is defined as the percentage of “completed contacts” when “refusals” and “completed contacts” equals 100%.

Response rate is defined as the percentage of “completed contacts” when “total numbers perceived to be working and residential” is 100%.

### Miscellaneous Information

The average questionnaire length was 38.6 minutes.

Interviewing was conducted in both English and Spanish. Both languages were administered via QUANCEPT (computer assisted interviewing) software.

Attachment D contains a description of data weighting conducted at SRBI before delivering the final data set to CSHP.