



**2017 NEW JERSEY STATEWIDE SURVEY ON OUR
HEALTH AND WELL BEING
Methodology Report**

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1 Summary

The 2017 New Jersey Statewide Survey on our Health and Well Being, fielded for the Robert Wood Johnson Foundation and the Rutgers Center for State Health Policy by Abt Associates, obtained telephone interviews with a representative sample of 1,052 adults living in New Jersey (452 were interviewed by landline telephone and 600 were interviewed on a cell phone). Interviewing was conducted in English and Spanish from October 12 to November 19, 2017.

Samples were drawn from both the landline and cell phone RDD frames. Persons with residential landlines were not screened out of the cell phone sample. Both the landline and cell phone samples were provided by Survey Sampling International, LLC. The combined sample is weighted to match demographic parameters from the American Community Survey and telephone status parameters from the National Health Interview Survey. The weighting procedure also accounts for the fact that respondents with both a landline and cell phone had a greater probability of selection. The margin of sampling error for weighted estimates based on the full sample is ± 3.7 percentage points.

2 Sample Design

The target population for the study was non-institutionalized persons age 18 and over, living in New Jersey. Samples were drawn from both the landline and cellular random digit dial (RDD) frames to represent people with access to either a landline or cell phone. Both samples were provided by Survey Sampling International, LLC (SSI) according to Abt Associates specifications.

The sample design was a Random Digit Dialed (RDD) sample of cell phone numbers and landline numbers with a New Jersey telephone exchange. This sample design is referred to as a “dual-frame” because it includes cell phones and landlines. We allocated 43% of the sample to landline frame and 57% of the interview to cellular frame.

The landline frame was constructed by compiling all New Jersey telephone exchanges that are classified as providing regular telephone service. The frame is referred to as “list-assisted” because a complete file of directory-listed residential numbers is used to remove 100-banks from the frame if they contain zero residential listings. The remaining 100-banks are “working” and used to enumerate all the telephone numbers within the bank from which a sample is drawn. All landline numbers (directory-listed and unlisted) in the working banks are eligible to be randomly dialed.

The cellular telephone frame begins with 1,000-blocks constructed from exchanges that provide cellular telephone service. The frame of 1,000-blocks is then expanded to the 100-block level to identify and remove “mixed use” 100-blocks, or those that include landline numbers. The result is a sampling of cellular 100-blocks that is mutually exclusive of the list-assisted RDD sampling frame described above.

For the landline sample, interviewers asked to speak with the person 18 years or older living in the household who had the most recent birthday. For the cell sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person is an adult and in a safe place before administering the survey.

3 Questionnaire Development and Testing

The questionnaire was developed by the Robert Wood Johnson Foundation at Rutgers University and the Rutgers Center for State Health Policy in consultation with Abt Associates. In order to improve the quality of the data, the questionnaire was pretested with a small number of respondents using landline RDD telephone numbers. The pretest interviews were conducted using experienced interviewers who could best judge the quality of the answers given and the degree to which respondents understood the questions. Some final changes were made to the questionnaire based on the monitored pretest interviews. The questionnaire was programmed in CATI and thoroughly tested prior to the start of interviewing.

4 Calling Protocol

Landline and cell phone numbers were called as many as 7 times. Refusal conversion was attempted on soft refusal cases. Calls were staggered over times of day and days of the week to maximize the chance of making contact with potential respondents. Each number received at least one daytime call. The sample was released for interviewing in replicates, which are representative subsamples of the larger sample. Using replicates to control the release of sample ensures that complete call procedures are followed for the entire sample.

For the landline sample, interviewers asked to speak with the person 18 years or older living in the household who had the most recent birthday. For the cell sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey. Cell sample respondents were offered a post-paid cash incentive of \$5 for their participation.

5 Weighting

The first stage of weighting corrected for different probabilities of selection associated with multiple landline telephone number in the household, the number of adults in the household and the respondent's telephone usage (landline only, cell phone only or has both kinds of phones). This weighting also adjusts for the overlapping landline and cell sample frames. This first-stage weight can be expressed as:

$$WT = \begin{cases} \frac{1}{\left(\frac{S_{ll}}{U_{ll}} \times \frac{LL}{AD}\right)}, & \text{if landline only} \\ \frac{1}{\left(\frac{S_{cp}}{U_{cp}} \times CP\right)}, & \text{if cell phone only} \\ 0.5 \times \left[\frac{1}{\left(\frac{S_{ll}}{U_{ll}} \times \frac{LL}{AD}\right)} + \frac{1}{\left(\frac{S_{cp}}{U_{cp}} \times CP\right)} \right], & \text{if dual user} \end{cases}$$

Where:

LL = number of landlines in the household (0, 1, 2, 3 or more)

CP =1 if respondent has a cell phone

=0 if respondent has no cell phone

S_{ll}= size of the landline sample drawn across all released replicates

S_{cp}=size of the cell phone sample drawn across all released replicates

U_{ll} =size of the landline RDD frame
 U_{cp} =size of the cell phone RDD frame
AD=number of adults in the household (1, 2, 3 or more)

The second stage of weighting balances sample demographics to estimated population parameters. The sample is balanced to match national population parameters for sex, age, education, race, Hispanic ethnicity, region (Northern, Central, Southern), and household telephone usage. The demographic weighting benchmarks were computed from the 2011-2015 American Community Survey 5 years estimates. The telephone usage population estimates for New Jersey were constructed from model-based state-level estimates released by the National Center for Health Statistics for the year 2015 and updated to reflect more recent national changes in household telephone service.

The second stage of weighting uses an iterative technique that simultaneously balances the distributions of all weighting parameters. Weights were trimmed at approximately the 2.3 and 98 percentiles to prevent individual interviews from having too much influence on the final results. The use of these weights in statistical analysis ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the national population.

6 Design Effect and Margin of Error

Weighting and survey design features that depart from simple random sampling tend to result in an increase in the variance of survey estimates. This increase, known as the design effect or *deff*, should be incorporated into the margin of error, standard errors, and tests of statistical significance. The overall design effect for a survey is commonly approximated as the 1 plus the squared coefficient of variation of the weights. For this survey, the margin of error (half-width of the 95% confidence interval) incorporating the design effect for full-sample estimates at 50% is ± 3.69 percentage points. Estimates based on subgroups will have larger margins of error. It is important to remember that random sampling error is only one possible source of error in a survey estimate. Other sources, such as question wording and reporting inaccuracy, may contribute additional error.

7 Dispositions

Table 1 reports the disposition of all sampled telephone numbers dialed for the survey. Abt Associates calculates three component rates: Response rate, Cooperation rate, and Contact rate¹:

- Response rate – the number of complete interviews with reporting units divided by the number of eligible reporting units in the sample.
- Cooperation rate – the proportion of all cases interviewed of all eligible units ever contacted.
- Contact rate – measures the proportion of all cases in which some responsible member of a housing unit was reached by the survey

Overall, the response rate (AAPOR RR3) was 7.0% for the landline sample and 6.1% for the cell sample.

¹ Abt Associates' disposition codes and reporting are consistent with the American Association for Public Opinion Research standards.

Table 1. Final Dispositions and Rates, by Sample

		Landline Sample	Cell Sample
Interview (Category 1)			
Complete	1.000	452	600
Partial	1.200	36	57
Eligible, non-interview (Category 2)			
Refusal and breakoff	2.100	17	28
Refusal	2.110	0	0
Respondent never available	2.210	0	0
Answering machine household-no message left	2.221	0	0
Deceased respondent	2.310	0	0
Physically or mentally unable/incompetent	2.320	0	0
Household-level language problem	2.331	0	0
Respondent language problem	2.332	0	0
Unknown eligibility, non-interview (Category 3)			
Always busy	3.120	381	657
No answer	3.130	4,545	3,663
Call blocking	3.150	2	347
Technical phone problems	3.160	0	0
No screener completed: No live contact made	3.210	2,762	11,391
No screener completed: Live contact made	3.210	2,738	5,699
Not eligible (Category 4)			
Fax/data line	4.200	1,163	38
Non-working/disconnect	4.300	22,361	5,261
Non-working number	4.310	0	0
Disconnected number	4.320	0	0
Temporarily out of service	4.330	798	1,871
Special technological circumstances	4.400	0	0
Number changed	4.410	0	0
Business, government office, other organizations	4.510	1,502	685
No eligible respondent	4.700	39	847
Other	4.900	0	0
Total phone numbers used		36,796	31,144
Completes (1.0)	I	452	600
Partial Interviews (1.2)	P	36	57
Eligible Non-Interview: Refusal (2.1)	R	17	28
Eligible Non-Interview: Non-Contact (2.2)	NC	0	0
Eligible Non-Interview: Other (2.3)	O	0	0

Undetermined If Working and Residential (3.1)	UH	4,928	4,667
Working and Residential But Undetermined Eligibility (3.2,3.9)			
Live contact was made	UO _C	2,762	11,391
Live contact not made	UO _{NC}	2,738	5,699
Not Eligible: Nonworking, Nonresidential, or Ported (4.1-4.5,4.9)	NWC	25,824	7,855
Screen Out: Working and Residential but Not Eligible (4.7)	SO	39	847
TOTAL		36,796	31,144
<hr/>			
e1 =(I+P+R+NC+O+UO _C +OU _{NC} +SO)/(I+P+R+NC+O+UO _C +OU _{NC} +SO+NWC)		19.0%	70.3%
e2 =(I+P+R)/(I+P+R+SO)		92.8%	44.7%
<hr/>			
AAPOR RR3 =			
I / (I+P+R+NC+O+[e1*e2*UH]+[e2*(UO _C +UO _{NC})])		6.98%	6.13%
AAPOR CON2 = (I+P+R+O+[e2*UO _C] /			
(I+P+R+NC+O+[e1*e2*UH]+[e2*(UO _C +UO _{NC})])		47.37%	59.00%
AAPOR COOP1 = I / (I+P+R+O+[e2*UO _C])		14.73%	10.38%
