The Behavioral Risk Factor Surveillance System

2017 Summary Data Quality Report

June 13, 2018

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Introduction

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based, CDC-assisted health-data collection project and partnership of state health departments, CDC's Division of Population Health, and other CDC programs and offices. It comprises telephone surveys conducted by the health departments of all 50 states, the District of Columbia, Puerto Rico, and Guam.

This *Summary Data Quality Report* presents detailed descriptions of the 2017 BRFSS calling outcomes and call summary information for each of the states and territories that participated. All BRFSS public-use data are collected by landline telephone and cellular telephone to produce a single data set aggregated from the 2017 BRFSS territorial- and state-level data sets. The variables and outcomes provided in this document are applicable to a combined data set of responses from participants using landline telephones and cellular telephones within each of the states and territories.

The inclusion of data from cellular telephone interviews in the BRFSS public release data set has been standard protocol since 2011. In many respects, 2011 was a year of change—both in BRFSS's approach and methodology. As the results of cellular telephone interviews were added in 2011, so were new weighting procedures that could accommodate the inclusion of new weighting variables. Data users should note that weighting procedures are likely to affect trend lines when comparing BRFSS data collected before and after 2011. Because of these changes, users are advised NOT to make direct comparisons with pre-2011 data, and instead, should begin new trend lines with that year. Details of changes beginning with the 2011 BRFSS are provided in the *Morbidity and Mortality Weekly Report* (*MMWR*), which highlights weighting and coverage effects on trend lines.[1]

The measures presented in this document are designed to summarize the quality of the 2017 BRFSS survey data. Response rates, cooperation rates, and refusal rates for BRFSS are calculated using standards set by the American Association for Public Opinion Research (AAPOR).[2] The BRFSS has calculated 2017 response rates using AAPOR Response Rate #4, which is in keeping with rates provided by BRFSS before 2011 using rates from the Council of American Survey Research Organizations (CASRO).[3]

On the basis of the AAPOR guidelines, response rate calculations include assumptions of eligibility among potential respondents or households that are not interviewed. Changes in the geographic distribution of cellular telephone numbers by telephone companies and the portability of landline telephone numbers are likely to make it more difficult than in the past to ascertain which telephone numbers are out-of-sample and which telephone numbers represent likely households. The BRFSS calculates likely households using the proportions of eligible households among all phone numbers where eligibility has been determined. This eligibility factor appears in calculations of response, cooperation, resolution, and refusal rates.

Interpretation of BRFSS Response Rates

Because this report reflects the inclusion of BRFSS cellular telephone interviews, contextual information on cellular telephone response rates is provided below. Although cellular telephone response rates are generally lower than landline telephone response rates across most surveys, the BRFSS has achieved a cellular telephone response rate that compares favorably with other similar surveys (Table 1). Moreover, since the initial inclusion

of cell phone respondents, the proportion of the sample that is interviewed by cell phone has increased. In many states, cell phone respondents are the majority of the sample. Since 2012, median BRFSS cell phone response rates have risen. Overall, BRFSS response rates have leveled off in the past few years, with landline rates declining and cell phone rates improving. The leveling-off of telephone survey response rates is noted for other federal surveys as well.[4]

Table 1.
Examples of Survey Response Rates by Cellular Telephone and Landline Telephone

		Response Rates	
Survey	**Year(s)**	**Landline**	**Cell Phone**
California Health Interview Survey (CHIS)[a]	2015	12.3%	9.5%
National Immunization Survey (NIS) [b]	2014	62.6%	33.5%
Pew Research Center Library Survey [c]	2013	10.0%	13.0%
PSRAI Omnibus Survey [d]	2015	5.0%	4.0%
National Adult Tobacco Survey (NATS) [e]	2012-2013	47.2%	36.3%
BRFSS [f]	2017	45.3%	44.5%

[a] CHIS 2015 Methodology Report Series. (2016) http://healthpolicy.ucla.edu/chis/design/Documents/chis-2015-short-methodology-report-4_response-rates_2016-12-13.pdf

[b] Unlike the BRFSS, the NIS does not include household sampling in the landline portion of the study but interviews the adult who self-identifies as the most knowledgeable about household immunization information. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6433a1.htm

[c] http://www.pewinternet.org/2014/04/03/methods-28/

[d] http://www.pewinternet.org/2015/04/01/appendix-a-about-the-december-week-1-and-week-3-omnibus-survey/

[e] http://www.cdc.gov/tobacco/data_statistics/surveys/nats/pdfs/2012-2013-nats-methodology-final.pdf

[f] BRFSS response rates are presented here as median rates for all states and territories.

Research by the Pew Research Center indicates that response rates for all telephone-based surveys have declined in recent years.[5] Comparisons of federal surveys indicate that all surveys including the BRFSS have experienced declining response rates in recent years.[4] Generally, response rates are lower for telephone surveys than for surveys conducted in person[5]. Despite lower response rates, this research supports previous findings[6] that weighting to demographic characteristics of respondents ensures accurate estimates for most measures.

The following tables present landline telephone and cellular telephone calling outcomes and rates. The BRFSS cellular telephone survey was collected in a manner similar to that of the BRFSS landline telephone survey. One important difference, however, is that interviews conducted by landline telephones include random selection among adults within households, while cellular telephone interviews are conducted with adults who are contacted on personal (nonbusiness) cellular telephones. The report presents data on three general types of measure by state:

1. Call outcome measures, including response rates, which are based on landline telephone disposition codes.

2. Call outcome measures, including response rates, which are based on cellular telephone disposition codes.

3. A weighted response rate, based on a combination of the landline telephone response rate with the cellular telephone response rate proportional to the total sample used to collect the data for a state.

For clarity, the BRFSS recommends that authors and researchers referencing BRFSS data quality include the following language, below. Note the places where authors should include information specific to their projects.

Response rates for BRFSS are calculated using standards set by the American Association for Public Opinion Research (AAPOR) Response Rate Formula #4 (http://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf). The response rate is the number of respondents who completed the survey as a proportion of all eligible and likely-eligible people. The median survey response rate for all states, territories and Washington, DC, in 2017 was 45.1 and ranged from 30.6 to 64.1[a] Response rates for states and territories included in this analysis had a median of [provide median] and ranged from [provide range],[b] For detailed information see the BRFSS Summary Data Quality Report [c]
[a] Response rates and ranges should reflect the year(s) included in the analyses. [b] Response rates for states selected for analysis should be included here. This sentence may be omitted if all states are used in the analysis. [c] See the Summary Data Quality Report for the year(s) included in the analyses. The 2017 document is available at: https://www.cdc.gov/brfss/annual_data/2017/pdf/2017-sdqr-508.pdf.

BRFSS 2017 Call Outcome Measures and Response Rate Formulae

The calculations of calling-outcome rates are based on final disposition codes that are assigned after all calling attempts have been exhausted. The BRFSS may make up to 15 attempts to reach a respondent before assigning a final disposition code. In 2017, the BRFSS used a single set of disposition codes for both landline and cell phones, adapted from standardized AAPOR disposition codes for telephone surveys. A few disposition codes apply only to landline telephone or to cellular telephone sample numbers. For example, answering-device messages may confirm household eligibility for landline telephone numbers but are not used to determine eligibility of cellular telephone numbers. Disposition codes reflect whether interviewers have completed or partially completed an interview (1000 level codes), determined that the household was eligible without completing an interview (2000 level codes), determined that a household or respondent was ineligible (4000 level codes), or was unable to determine the eligibility of a household or respondent (3000 level codes). The table below illustrates the codes used by the BRFSS in 2017, and it notes the instances where codes are used only for landline telephone or cellular telephone sample numbers.

The Disposition Code Table below uses a number of terms to define and categorize outcomes. These include the following:

- Respondent: A person who is contacted by an interviewer and who may be eligible for interview.
- Private residence: Persons residing in private residences or college housing are eligible. Persons living in group homes, military barracks or other living arrangements are not eligible. Persons living in vacation homes for 30 days or more are eligible. Eligibility is ascertained by asking each potential respondent whether they live in a private residence. If respondents are unsure whether their residence qualifies, additional definitions of residences are provided.

- Landline telephone: A telephone that is used within a specific location, including traditional household telephones, Voice Over Internet Protocol (VOIP), and Internet phones connected to computers in a household.
- Cellular telephone: A mobile device that is not tied to a specific location for use.
- Selected respondent: A person who is eligible for interview. For the cellular telephone sample, a selected respondent is an adult associated with the phone number who lives in a private residence or college housing within the United States or territories covered by the BRFSS. For the landline telephone sample, a selected respondent is the person chosen for interview during the household enumeration section of the screening questions.
- Personal cellular telephone: A cellular telephone that is used for personal calls. Cellular telephones that are used for both personal and business calls may be categorized as personal telephones and persons contacted on these phones are eligible for interview. Persons using telephones that are exclusively for business use are not eligible for interview.

Table 2.
2017 Disposition Codes for Landline Telephones and Cellular Telephones

Category	Code	Description
Interviewed (1000-level codes)	1100	Completed interview
	1200	Partially completed interview
Eligible, Non-Interview (2000 level codes)	2111	Household level refusal (used for landline only)
	2112	Selected respondent refusal
	2120	Break off/termination within questionnaire
	2210	Selected respondent never available
	2220	Household (nonbusiness) answering device (used for landline only)
	2320	Selected respondent physically or mentally unable to complete interview
	2330	Language barrier of selected respondent
Unknown Eligibility	3100	Unknown if housing unit
	3130	No answer
	3140	Answering device, unknown whether eligible
	3150	Telecommunication barrier (i.e. call blocking)
	3200	Household, not known if respondent eligible
	3322	Physical or mental impairment (household level)
	3330	Language barrier (household level)
	3700	On never-call list

Table 2.
2017 Disposition Codes for Landline Telephones and Cellular Telephones

Category	Code	Description
Not Eligible	4100	Out of sample
	4200	Fax/data/modem
	4300	Nonworking/disconnected number
	4400	Technological barrier (i.e., fast busy, phone circuit barriers)
	4430	Call forwarding/pager
	4450	Cellular telephone number (used for landline telephone only)
	4460	Landline telephone number (used for cellular telephone only)
	4500	Non-residence/business
	4700	Household, no eligible respondent (teen phone/minor child cellular telephone)
	4900	Miscellaneous, non-eligible

Factors affecting the distribution of disposition codes by state include differences in telephone systems, sample designs, surveyed populations, and data collection processes. Table 3 defines the categories of disposition codes used to calculate outcome and response rates illustrated in Tables 4A through 6.

Table 3.
Categories of 2017 Landline and Cellular Telephone Disposition Codes

Category	Disposition Code Definitions	Formulae Abbreviation
Completed Interviews	1100+1200	COIN
Eligible	1100+1200+2111+2112+2120+2210+2220+2320+2330	ELIG
Contacted Eligible	1100+1200+2111+2112+2120+2210+2320+2330	CONELIG
Terminations and Refusals	2111+2112+2120	TERE
Ineligible Phone Numbers	All 4000 level disposition codes	INELIG

Table 3.
Categories of 2017 Landline and Cellular Telephone Disposition Codes

Category	Disposition Code Definitions	Formulae Abbreviation
Unknown Whether Eligible	All 3000 level disposition codes	UNKELIG
Eligibility Factor	ELIG/(ELIG + INELIG)	E

The disposition codes are categorized according to the groups illustrated in Table 3 to produce rates of resolution, cooperation, completion, refusal and response. In accordance with population surveillance standards, the proportions of people who may have been eligible for interview, but who were not able to be interviewed, are accounted for in the formulae.

Eligibility Factor

E = ELIG/ (ELIG + INELIG)

The Eligibility Factor is the proportion of eligible phone numbers from among all sample numbers for which eligibility has been determined. The eligibility factor, therefore, provides a measure of eligibility that can be applied to sample numbers with unknown eligibility. The purpose of the eligibility factor is to estimate the proportion of the sample that is likely to be eligible. The eligibility factor is used in the calculations of refusal and response rates. Separate eligibility factors are calculated for landline telephones and cellular telephone samples for each state and territory.

Resolution Rate

((ELIG + INELIG) / (ELIG+INELIG+UNKELIG))*100

The Resolution Rate is the percentage of numbers in the total sample for which eligibility has been determined. The total number of eligible and ineligible sample phone numbers is divided by the total number of phone numbers in the entire sample. The result is multiplied by 100 to calculate the percentage of the sample for which eligibility is determined. Separate resolution rates are calculated for landline telephone and cellular telephone samples for each state and territory.

Interview Completion Rate

(COIN / (COIN + TERE)) * 100

The Interview Completion Rate is the rate of completed interviews among all respondents who have been determined to be eligible and selected for interviewing. The numerator is the number of complete and partially completed interviews. This number is divided by the number of completed interviews, partially completed interviews, and all break offs, refusals, and terminations. The result is multiplied by 100 to provide the percentage of completed interviews among eligible respondents who are contacted by interviewers. Separate interview completion rates are calculated for landline telephone and cellular telephone samples for each state and territory.

Cooperation Rate

(COIN / CONELIG) *100

The AAPOR Cooperation Rate is the number of complete and partial complete interviews divided by the number of contacted and eligible respondents. The BRFSS Cooperation Rate follows the guidelines of AAPOR Cooperation Rate #2. Separate cooperation rates are calculated for landline telephone and cellular telephone samples for each state and territory.

Refusal Rate

(TERE / (ELIG + (E * UNKELIG))) * 100

The BRFSS Refusal Rate is the proportion of all eligible respondents who refused to complete an interview or terminated an interview prior to the threshold required to be considered a partial interview. Refusals and terminations (TERE) are in the numerator, and the denominator includes all eligible numbers and a proportion of the numbers with unknown eligibility. The proportion of numbers with unknown eligibility is determined by the eligibility factor (E as described above). The result is then multiplied by 100 to provide a percentage of refusals among all eligible and likely to be eligible numbers in the sample. Separate refusal rates are calculated for landline telephone and cellular telephone samples for each state and territory.

Response Rate

(COIN / ((ELIG + (E * UNKELIG))) * 100

A Response Rate is an outcome rate with the number of complete and partial interviews in the numerator and an estimate of the number of eligible units in the sample in the denominator. The BRFSS Response Rate calculation assumes that the unresolved numbers contain the same percentage of eligible households or eligible personal cell phones as the records whose eligibility or ineligibility are determined. The BRFSS Response Rate follows the guidelines for AAPOR Response Rate #4. It also is similar to the BRFSS CASRO Rates reported prior to 2011. Separate eligibility factors are calculated for landline telephone and cellular telephone samples for each state and territory, and a combined Response Rate for landline telephone and cellular telephone also is calculated. The combined landline telephone and cellular telephone response rate is generated by weighting to the respective size of the two samples. The total sample equals the landline telephone sample plus cellular telephone sample. The proportion of each sample is calculated using the total sample as the denominator. The formulae for the proportions of the sample are found below:

P1 = TOTAL LANDLINE SAMPLE /
(TOTAL LANDLINE SAMPLE + TOTAL CELL PHONE SAMPLE);

P2 = TOTAL CELL PHONE SAMPLE /
(TOTAL LANDLINE SAMPLE + TOTAL CELL PHONE SAMPLE);

The formula for the Combined Landline Telephone and Cellular Telephone Weighted Response Rate, therefore, is described below:

COMBINED RESPONSE RATE=
(P1 * LANDLINE RESPONSE RATE) + (P2 * CELL PHONE RESPONSE RATE).

Tables of Outcomes and Rates by State

The tables on the following pages illustrate calling outcomes in categories of eligibility, rates of cooperation, refusal, resolution, and response by landline telephone and cellular telephone samples.

>Tables 4A and 4B provide information on the size of the sample and the numbers and percentages of completed interviews, cooperation rates, terminations and refusals, and contacts with eligible households by state and territory.

>Tables 5A and 5B provide information on the number and percentage of landline telephone and cellular telephone sample numbers that are eligible, ineligible, and of unknown eligibility.

>Table 6 provides response rates for landline telephone samples, cellular telephone samples, and combined samples.

Table 4A. Landline Sample.
Completions, Terminations and Refusals, Contacted Eligible Households and Total Sample by State

	COIN		TERE		CONELIG		COOP	
State	N	%	N	%	N	%	%	Total Sample
AL	2,539	3.3	1,453	1.9	4,398	5.8	57.7	75,856
AK	1,995	1.3	858	0.5	3,264	2.1	61.1	157,110
AZ	6,078	3.0	2,365	1.2	9,227	4.5	65.9	204,240
AR	4,024	3.5	1,767	1.5	6,197	5.4	64.9	115,770
CA	1,980	1.6	1,331	1.1	3,766	3.1	52.6	120,809
CO	3,875	4.4	902	1.0	5,542	6.2	69.9	88,920
CT	5,533	5.9	2,006	2.2	8,176	8.8	67.7	93,090
DE	1,479	2.1	337	0.5	2,276	3.3	65.0	70,020
DC	1,742	2.6	292	0.4	2,091	3.1	83.3	66,544
FL	7,614	1.8	1,721	0.4	11,541	2.7	66.0	428,310
GA	2,611	1.2	501	0.2	3,977	1.9	65.7	213,660
HI	2,208	3.2	690	1.0	3,870	5.6	57.1	68,550
ID	1,987	2.9	754	1.1	3,107	4.5	64.0	68,730
IL	2,497	2.8	1,052	1.2	4,150	4.6	60.2	89,460
IN	6,798	2.5	3,167	1.1	11,496	4.1	59.1	277,260
IA	2,314	4.2	985	1.8	3,668	6.7	63.1	55,080
KS	7,787	4.0	3,249	1.7	11,980	6.2	65.0	193,500
KY	3,521	2.1	646	0.4	4,298	2.6	81.9	167,580
LA	1,629	2.5	1,108	1.7	3,071	4.7	53.0	65,158
ME	5,664	4.8	1,645	1.4	8,039	6.8	70.5	118,890
MD	8,953	3.8	4,124	1.8	14,579	6.2	61.4	233,850
MA	3,229	2.0	3,094	1.9	6,881	4.3	46.9	160,547
MI	4,240	3.4	1,088	0.9	6,362	5.1	66.6	124,470
MN	6,036	3.2	919	0.5	8,377	4.5	72.1	186,690
MS	2,513	2.9	1,257	1.5	4,400	5.1	57.1	86,520
MO	3,555	4.7	980	1.3	5,299	7.0	67.1	75,407

Table 4A. Landline Sample.
Completions, Terminations and Refusals, Contacted Eligible Households and Total Sample by State

	COIN		TERE		CONELIG		COOP	
State	N	%	N	%	N	%	%	Total Sample
MT	3,034	5.1	736	1.2	4,464	7.4	68.0	60,060
NE	6,137	5.4	2,228	1.9	9,490	8.3	64.7	114,479
NV	1,825	3.1	666	1.1	2,790	4.7	65.4	59,580
NH	3,493	5.1	1,252	1.8	5,174	7.5	67.5	69,057
NJ	7,535	2.0	1,835	0.5	12,144	3.2	62.0	383,400
NM	2,910	3.2	1,374	1.5	5,023	5.6	57.9	90,123
NY	5,445	2.4	3,002	1.3	10,018	4.3	54.4	231,570
NC	1,211	4.0	628	2.1	2,066	6.9	58.6	30,120
ND	3,713	4.7	959	1.2	5,205	6.5	71.3	79,740
OH	7,208	3.0	1,156	0.5	10,263	4.3	70.2	237,420
OK	3,118	3.6	1,542	1.8	5,761	6.7	54.1	85,696
OR	1,512	3.3	707	1.5	2,406	5.2	62.8	46,065
PA	1,946	4.0	926	1.9	3,295	6.8	59.1	48,300
RI	2,640	4.9	1,036	1.9	4,025	7.5	65.6	53,880
SC	5,900	5.5	1,746	1.6	9,131	8.5	64.6	107,820
SD	3,484	2.2	1,412	0.9	5,278	3.3	66.0	160,380
TN	1,938	3.2	1,068	1.7	3,306	5.4	58.6	61,202
TX	6,461	2.0	2,794	0.9	10,973	3.4	58.9	318,540
UT	2,709	4.8	637	1.1	4,007	7.1	67.6	56,131
VT	3,213	4.1	1,396	1.8	4,914	6.3	65.4	78,600
VA	4,725	3.3	917	0.6	7,103	5.0	66.5	142,230
WA	5,221	3.5	2,063	1.4	7,735	5.2	67.5	147,570
WV	2,826	9.6	781	2.6	4,000	13.6	70.7	29,520
WI	2,265	4.3	1,102	2.1	3,824	7.2	59.2	52,920
WY	2,263	4.8	256	0.5	2,970	6.3	76.2	47,040
GU	854	3.3	412	1.6	1,888	7.4	45.2	25,530

Table 4A. Landline Sample.
Completions, Terminations and Refusals, Contacted Eligible Households and Total Sample by State

	COIN		TERE		CONELIG		COOP	
State	**N**	**%**	**N**	**%**	**N**	**%**	**%**	**Total Sample**
PR	1,708	5.2	217	0.7	2,434	7.4	70.2	32,786
Minimum	854	1.2	61	0.2	1,888	1.9	45.2	25,530
Maximum	8,953	9.6	4,124	2.6	14,579	13.6	83.3	428,310
Mean	3,730	3.6	1,342	1.3	5,844	5.6	63.8	121,807
Median	3,076	3.3	1,078	1.3	4,689	5.4	65.0	87,720

Table 4B. Cell Phone Sample.
Completions, Terminations and Refusals, Contacted Eligible Households and Total Sample by State

	COIN		TERE		CONELIG		COOP	
State	N	%	N	%	N	%	%	Total Sample
AL	4,131	5.5	920	1.2	5,156	6.8	80.1	75,395
AK	1,236	5.1	149	0.6	1,419	5.8	87.1	24,420
AZ	9,407	5.8	2,042	1.3	11,813	7.3	79.6	162,120
AR	1,205	6.7	159	0.9	1,397	7.7	86.3	18,060
CA	6,772	5.4	2,337	1.9	9,539	7.6	71.0	124,948
CO	5,917	9.4	506	0.8	6,514	10.3	90.8	62,993
CT	5,518	4.9	1,520	1.4	7,311	6.5	75.5	112,410
DE	2,837	2.4	593	0.5	3,820	3.2	74.3	118,800
DC	2,619	3.8	462	0.7	3,129	4.6	83.7	68,628
FL	13,649	4.2	2,544	0.8	17,772	5.4	76.8	326,640
GA	3,031	2.8	577	0.5	4,059	3.7	74.7	108,720
HI	5,426	7.8	783	1.1	6,388	9.2	84.9	69,528
ID	2,897	10.8	339	1.3	3,297	12.3	87.9	26,910
IL	2,807	5.4	486	0.9	3,371	6.5	83.3	52,170
IN	7,337	5.4	1,452	1.1	9,015	6.6	81.4	136,950
IA	5,449	8.9	638	1.0	6,175	10.0	88.2	61,560
KS	15,339	5.2	2,176	0.7	17,703	6.0	86.6	295,950
KY	5,206	3.9	752	0.6	6,020	4.5	86.5	133,103
LA	3,170	4.8	967	1.5	4,216	6.4	75.2	65,640
ME	4,309	7.7	560	1.0	4,957	8.9	86.9	55,980
MD	4,831	6.3	940	1.2	5,880	7.6	82.2	77,100
MA	3,418	3.6	647	0.7	4,113	4.3	83.1	95,729
MI	6,910	6.0	1,069	0.9	9,069	7.9	76.2	115,170
MN	10,512	4.9	918	0.4	12,155	5.7	86.5	214,770
MS	2,603	5.0	757	1.5	3,449	6.7	75.5	51,785
MO	3,543	8.8	403	1.0	4,076	10.1	86.9	40,338

Table 4B. Cell Phone Sample.
Completions, Terminations and Refusals, Contacted Eligible Households and Total Sample by State

	COIN		TERE		CONELIG		COOP	
State	N	%	N	%	N	%	%	Total Sample
MT	3,009	7.8	226	0.6	3,309	8.6	90.9	38,531
NE	9,686	8.9	1,151	1.1	11,162	10.2	86.8	109,080
NV	1,840	9.1	199	1.0	2,055	10.2	89.5	20,130
NH	2,425	6.6	476	1.3	2,956	8.1	82.0	36,690
NJ	4,403	2.5	1,094	0.6	6,354	3.6	69.3	178,380
NM	3,824	9.2	712	1.7	4,628	11.1	82.6	41,610
NY	7,163	4.2	2,110	1.2	9,778	5.8	73.3	168,974
NC	3,202	7.7	447	1.1	3,752	9.0	85.3	41,490
ND	3,690	4.7	492	0.6	4,282	5.5	86.2	77,940
OH	4,971	5.3	497	0.5	5,941	6.3	83.7	93,930
OK	3,445	5.5	813	1.3	4,330	6.9	79.6	62,485
OR	3,664	6.5	694	1.2	4,371	7.7	83.8	56,744
PA	4,466	6.4	697	1.0	5,314	7.6	84.0	69,510
RI	3,240	4.6	639	0.9	4,006	5.7	80.9	70,200
SC	5,416	7.8	884	1.3	6,453	9.3	83.9	69,330
SD	3,605	4.4	608	0.7	4,257	5.2	84.7	81,303
TN	3,800	5.3	1,000	1.4	4,877	6.8	77.9	71,580
TX	4,752	5.3	1,355	1.5	6,334	7.1	75.0	89,280
UT	7,855	11.8	495	0.7	8,693	13.1	90.4	66,332
VT	3,235	5.7	541	1.0	3,849	6.8	84.0	56,790
VA	4,720	5.4	611	0.7	5,680	6.5	83.1	87,630
WA	8,214	7.6	1,603	1.5	10,027	9.3	81.9	107,670
WV	2,745	8.7	301	1.0	3,072	9.7	89.4	31,681
WI	3,673	8.0	815	1.8	4,650	10.2	79.0	45,690
WY	2,297	3.7	191	0.3	2,638	4.3	87.1	61,920
GU	654	4.7	132	0.9	821	5.9	79.7	13,980

Table 4B. Cell Phone Sample.
Completions, Terminations and Refusals, Contacted Eligible Households and Total Sample by State

	COIN		TERE		CONELIG		COOP	
State	**N**	**%**	**N**	**%**	**N**	**%**	**%**	**Total Sample**
PR	2,889	17.7	159	1.0	3,151	19.3	91.7	16,333
Minimum	654	2.4	132	0.3	821	3.2	69.3	13,980
Maximum	15,339	17.7	2,544	1.9	17,772	19.3	91.7	326,640
Mean	4,773	6.3	823	1.0	5,821	7.6	82.5	86,057
Median	3,745	5.5	643	1.0	4,639	7.0	83.5	69,420

Table 5A. Landline Sample. Categories of Eligibility by State (Landline Only).

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
AL	7,770	10.2	58,285	76.8	9,801	12.9
AK	3,571	2.3	141,902	90.3	11,637	7.4
AZ	11,614	5.7	160,699	78.7	31,927	15.6
AR	7,038	6.1	90,875	78.5	17,857	15.4
CA	5,363	4.4	89,909	74.4	25,537	21.1
CO	6,187	7.0	69,886	78.6	12,847	14.4
CT	10,053	10.8	62,478	67.1	20,559	22.1
DE	2,314	3.3	47,398	67.7	20,308	29.0
DC	6,674	10.0	52,218	78.5	7,652	11.5
FL	12,146	2.8	321,822	75.1	94,342	22.0
GA	4,215	2.0	161,920	75.8	47,525	22.2
HI	4,343	6.3	52,634	76.8	11,573	16.9
ID	3,621	5.3	56,765	82.6	8,344	12.1
IL	10,365	11.6	69,775	78.0	9,320	10.4
IN	14,617	5.3	212,308	76.6	50,335	18.2
IA	4,006	7.3	43,212	78.5	7,862	14.3
KS	14,085	7.3	153,651	79.4	25,764	13.3
KY	4,603	2.7	136,394	81.4	26,583	15.9
LA	4,956	7.6	50,437	77.4	9,765	15.0
ME	9,075	7.6	89,127	75.0	20,688	17.4
MD	18,172	7.8	162,087	69.3	53,591	22.9
MA	8,146	5.1	108,862	67.8	43,539	27.1
MI	7,079	5.7	96,827	77.8	20,564	16.5
MN	8,562	4.6	143,784	77.0	34,344	18.4
MS	4,647	5.4	69,316	80.1	12,557	14.5
MO	6,417	8.5	57,496	76.2	11,494	15.2
MT	5,112	8.5	48,024	80.0	6,924	11.5

Table 5A. Landline Sample.
Categories of Eligibility by State (Landline Only).

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
NE	12,155	10.6	90,323	78.9	12,001	10.5
NV	3,264	5.5	44,241	74.3	12,075	20.3
NH	6,587	9.5	48,681	70.5	13,789	20.0
NJ	13,115	3.4	269,243	70.2	101,042	26.4
NM	5,355	5.9	73,122	81.1	11,646	12.9
NY	12,569	5.4	159,574	68.9	59,427	25.7
NC	3,938	13.1	21,674	72.0	4,508	15.0
ND	5,763	7.2	64,149	80.4	9,828	12.3
OH	10,791	4.5	182,141	76.7	44,488	18.7
OK	6,154	7.2	68,692	80.2	10,850	12.7
OR	2,406	5.2	38,598	83.8	5,061	11.0
PA	3,842	8.0	33,945	70.3	10,513	21.8
RI	5,028	9.3	34,793	64.6	14,059	26.1
SC	10,924	10.1	79,816	74.0	17,080	15.8
SD	5,883	3.7	143,875	89.7	10,622	6.6
TN	5,419	8.9	47,224	77.2	8,559	14.0
TX	13,325	4.2	249,240	78.2	55,975	17.6
UT	4,199	7.5	44,840	79.9	7,092	12.6
VT	6,671	8.5	56,302	71.6	15,627	19.9
VA	7,471	5.3	102,609	72.1	32,150	22.6
WA	11,190	7.6	113,327	76.8	23,053	15.6
WV	5,248	17.8	17,997	61.0	6,275	21.3
WI	4,187	7.9	39,600	74.8	9,133	17.3
WY	3,019	6.4	37,036	78.7	6,985	14.8
GU	2,033	8.0	20,535	80.4	2,962	11.6
PR	2,579	7.9	25,731	78.5	4,476	13.7
Minimum	2,314	2.0	17,997	61.0	2,962	6.6

Table 5A. Landline Sample.
Categories of Eligibility by State (Landline Only).

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
Maximum	18,172	17.8	321,822	90.3	101,042	29.0
Mean	7,130	7.0	92,743	76.2	21,934	16.8
Median	6,019	7.1	69,004	77.1	12,316	15.6

Table 5B. Cell Phone Sample. Categories of Eligibility by State (Cell Phone Only).

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
AL	5,156	6.8	36,251	48.1	33,988	45.1
AK	1,419	5.8	17,851	73.1	5,150	21.1
AZ	11,813	7.3	72,703	44.8	77,604	47.9
AR	1,397	7.7	8,180	45.3	8,483	47.0
CA	9,539	7.6	49,765	39.8	65,644	52.5
CO	6,514	10.3	27,596	43.8	28,883	45.9
CT	7,311	6.5	40,894	36.4	64,205	57.1
DE	3,820	3.2	50,989	42.9	63,991	53.9
DC	3,129	4.6	37,978	55.3	27,521	40.1
FL	17,772	5.4	166,441	51.0	142,427	43.6
GA	4,059	3.7	51,654	47.5	53,007	48.8
HI	6,388	9.2	29,344	42.2	33,796	48.6
ID	3,297	12.3	11,161	41.5	12,452	46.3
IL	3,371	6.5	25,510	48.9	23,289	44.6
IN	9,015	6.6	61,143	44.6	66,792	48.8
IA	6,175	10.0	31,323	50.9	24,062	39.1
KS	17,703	6.0	172,613	58.3	105,634	35.7
KY	6,020	4.5	64,153	48.2	62,930	47.3
LA	4,216	6.4	30,677	46.7	30,747	46.8
ME	4,957	8.9	23,632	42.2	27,391	48.9
MD	5,880	7.6	30,703	39.8	40,517	52.6
MA	4,113	4.3	41,293	43.1	50,323	52.6
MI	9,069	7.9	57,936	50.3	48,165	41.8
MN	12,155	5.7	102,926	47.9	99,689	46.4
MS	3,449	6.7	28,535	55.1	19,801	38.2
MO	4,076	10.1	19,399	48.1	16,863	41.8
MT	3,309	8.6	20,784	53.9	14,438	37.5

Table 5B. Cell Phone Sample.
Categories of Eligibility by State (Cell Phone Only).

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
NE	11,162	10.2	66,797	61.2	31,121	28.5
NV	2,055	10.2	7,982	39.7	10,093	50.1
NH	2,956	8.1	15,456	42.1	18,278	49.8
NJ	6,354	3.6	72,707	40.8	99,319	55.7
NM	4,628	11.1	20,992	50.4	15,990	38.4
NY	9,778	5.8	68,114	40.3	91,082	53.9
NC	3,752	9.0	17,152	41.3	20,586	49.6
ND	4,282	5.5	47,487	60.9	26,171	33.6
OH	5,941	6.3	44,715	47.6	43,274	46.1
OK	4,330	6.9	37,809	60.5	20,346	32.6
OR	4,371	7.7	21,233	37.4	31,140	54.9
PA	5,314	7.6	30,222	43.5	33,974	48.9
RI	4,006	5.7	28,259	40.3	37,935	54.0
SC	6,453	9.3	31,746	45.8	31,131	44.9
SD	4,257	5.2	54,242	66.7	22,804	28.0
TN	4,877	6.8	30,845	43.1	35,858	50.1
TX	6,334	7.1	41,454	46.4	41,492	46.5
UT	8,693	13.1	32,745	49.4	24,894	37.5
VT	3,849	6.8	24,373	42.9	28,568	50.3
VA	5,680	6.5	39,440	45.0	42,510	48.5
WA	10,027	9.3	42,325	39.3	55,318	51.4
WV	3,072	9.7	12,241	38.6	16,368	51.7
WI	4,650	10.2	22,868	50.1	18,172	39.8
WY	2,638	4.3	43,054	69.5	16,228	26.2
GU	821	5.9	9,778	69.9	3,381	24.2
PR	3,151	19.3	5,034	30.8	8,148	49.9
Minimum	1,397	3.2	3,104	30.8	831	19.6

Table 5B. Cell Phone Sample.
Categories of Eligibility by State (Cell Phone Only).

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
Maximum	17,772	19.3	172,613	73.4	142,427	57.1
Mean	5,822	7.6	41,141	47.8	39,093	44.6
Median	4,639	7.0	31,535	46.1	30,934	46.7

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
AL	28.5	44.0	36.2
AK	51.7	68.7	54.0
AZ	44.2	41.5	43.0
AR	48.4	45.7	48.0
CA	29.1	33.7	31.4
CO	53.6	49.2	51.8
CT	42.9	32.4	37.1
DE	45.4	34.3	38.4
DC	23.1	50.1	36.8
FL	48.9	43.3	46.5
GA	48.2	38.3	44.8
HI	42.3	43.7	43.0
ID	48.2	47.2	47.9
IL	21.6	46.1	30.6
IN	38.1	41.7	39.3
IA	49.5	53.8	51.8
KS	47.9	55.7	52.6
KY	64.4	45.6	56.1
LA	27.9	40.0	34.0
ME	51.6	44.4	49.3
MD	38.0	39.0	38.2
MA	28.9	39.4	32.8
MI	50.0	44.3	47.3
MN	57.5	46.3	51.5
MS	46.2	46.6	46.4
MO	47.0	50.6	48.2
MT	52.5	56.9	54.2
NE	45.2	62.0	53.4

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
NV	44.6	44.6	44.6
NH	42.4	41.2	42.0
NJ	42.3	30.7	38.6
NM	47.3	50.9	48.4
NY	32.2	33.8	32.9
NC	26.1	43.0	35.9
ND	56.5	57.2	56.9
OH	54.3	45.1	51.7
OK	44.3	53.7	48.2
OR	55.9	37.8	45.9
PA	39.6	43.0	41.6
RI	38.8	37.2	37.9
SC	45.5	46.2	45.8
SD	55.3	60.9	57.2
TN	30.8	38.9	35.1
TX	40.0	40.2	40.0
UT	56.4	56.4	56.4
VT	38.6	41.8	39.9
VA	48.9	42.8	46.6
WA	39.4	39.8	39.6
WV	42.4	43.2	42.8
WI	44.8	47.6	46.1
WY	63.8	64.3	64.1
GU	37.1	60.4	45.4
PR	57.2	45.9	53.4
Minimum	21.6	30.7	30.6
Maximum	64.4	68.7	64.1

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
Mean	44.2	45.8	44.9
Median	45.3	44.5	45.9

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