Behavioral Risk Factor Surveillance System

2016 Summary Data Quality Report
June 29, 2017

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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, the Virgin Islands and Guam.

This *Summary Data Quality Report* presents detailed descriptions of the 2016 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 2016 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 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 2016 BRFSS survey data. Response rates, cooperation rates, and refusal rates for BRFSS are calculated using standards set by the American Association of Public Opinion Research (AAPOR).[2] The BRFSS has calculated 2016 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. Since 2012, median BRFSS cell phone response rates have risen[g].

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

		Response Rates	
Survey	**Year(s)**	**Landline**	**Cell Phone**
California Health Interview Survey (CHIS)	2011–2012	17.0%	18.3%
The Commonwealth Fund 2010 Biennial Health Insurance Survey[b]	2012	29.0%	25.0%
National Immunization Survey (NIS)[a] [c]	2014	62.6% [a]	33.5%
Pew Internet and American Life Project[d]	2012	30.0%	20.0%
PSRAI Omnibus Survey[e]	2015	5.0%	4.0%
National Adult Tobacco Survey (NATS)[f]	2012-2013	47.2%	36.3%
BRFSS[h]	2016	47.7%	46.4%

[c]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.

[a]http://healthpolicy.ucla.edu/chis/design/Documents/chis2011-2012-method-2_2014-02-21.pdf

[b]http://www.commonwealthfund.org/interactives-and-data/surveys/2011/mar/2010-biennial-health-insurance-survey

[c]http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6433a1.htm

[d]http://www.people-press.org/2006/05/15/the-cell-phone-challenge-to-survey-research/

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

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

[g]https://aspe.hhs.gov/system/files/pdf/255531/Decliningresponserates.pdf

[h]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.[4] Recent comparisons of federal surveys indicate that all surveys including the BRFSS has experienced declining response rates[5]. 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 of 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 2016 was 47.0%, and ranged from 30.7% to 65.0%.[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] This link is to the Summary Data Quality Report for the year(s) included in the analyses. XXX insert working link to 2016 DQR hereXXX

BRFSS 2016 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 2016, 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 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 2016, 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 the respondent is 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.
2016 Landline Telephone and Cellular Telephone BRFSS Disposition Codes

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.
2016 Landline Telephone and Cellular Telephone BRFSS Disposition Codes

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
	4510	Group home
	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 2016 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

Table 3.
Categories of 2016 Landline and Cellular Telephone Disposition Codes

Category	Disposition Code Definitions	Formulae Abbreviation
Terminations and Refusals	2111+2112+2120	TERE
Ineligible Phone Numbers	All 4000 level disposition codes	INELIG
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	2,327	3.2	1,376	1.9	4,217	5.7	55.2	73,707
AK	1,903	1.7	720	0.6	2,965	2.7	64.2	111,570
AZ	7,535	2.7	3,727	1.3	11,768	4.2	64.0	281,250
AR	4,014	3.5	1,976	1.7	6,263	5.5	64.1	114,330
CA	3,431	1.6	1,844	0.9	6,593	3.0	52.0	216,644
CO	7,684	4.2	1,686	0.9	10,861	6.0	70.7	181,020
CT	7,196	4.5	3,712	2.3	11,498	7.1	62.6	161,189
DE	1,746	2.9	441	0.7	2,684	4.5	65.1	59,280
DC	1,570	2.0	351	0.4	1,976	2.5	79.5	79,710
FL	19,374	2.3	3,721	0.4	27,858	3.2	69.5	859,770
GA	3,115	1.7	697	0.4	4,806	2.6	64.8	184,410
HI	3,167	2.1	963	0.6	5,739	3.7	55.2	154,380
ID	2,857	2.7	1,055	1.0	4,415	4.2	64.7	105,840
IL	2,091	3.0	656	0.9	3,325	4.7	62.9	70,020
IN	7,204	2.8	3,420	1.3	12,187	4.7	59.1	260,100
IA	3,728	4.1	1,415	1.6	5,847	6.4	63.8	91,019
KS	5,941	3.8	2,634	1.7	9,266	5.9	64.1	156,130
KY	5,195	3.1	860	0.5	6,246	3.7	83.2	167,760
LA	3,401	1.7	2,328	1.2	6,536	3.3	52.0	198,330
ME	6,034	1.4	1,662	1.4	8,536	7.2	70.7	118,170
MD	12,234	3.6	6,194	1.8	19,883	5.8	61.5	343,710
MA	3,962	3.8	2,523	0.9	6,729	2.4	58.9	279,885
MI	4,797	3.4	1,269	0.9	7,173	5.1	66.9	139,800
MN	6,366	3.6	1,002	0.6	8,943	5.1	71.2	176,280
MS	2,005	3.5	869	1.5	3,293	5.7	60.9	57,330

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
MO	4,201	4.4	1,250	1.3	6,295	6.5	66.7	96,140
MT	3,682	4.7	873	1.1	5,344	6.8	68.9	78,062
NE	6,621	5.1	2,245	1.7	10,126	7.8	65.4	129,689
NV	2,022	2.5	699	0.9	2,996	3.7	67.5	81,090
NH	3,631	4.7	1,514	2.0	5,328	6.9	68.1	77,460
NJ	4,982	2.5	1,060	0.5	7,607	3.9	65.5	196,890
NM	3,054	3.6	1,358	1.6	5,114	6.0	59.7	84,840
NY	18,868	3.1	9,444	1.5	32,569	5.3	57.9	613,680
NC	1,894	4.1	701	1.5	2,948	6.3	64.2	46,470
ND	3,067	3.9	732	0.9	4,245	5.4	72.2	79,050
OH	7,858	3.4	1,277	0.6	11,116	4.8	70.7	230,670
OK	3,704	3.8	1,822	1.9	6,614	6.8	56.0	97,560
OR	1,764	2.3	670	0.9	2,533	3.4	69.6	75,149
PA	2,318	4.5	1,038	2.0	3,866	7.5	60.0	51,300
RI	2,904	5.0	1,354	2.3	4,546	7.8	63.9	58,619
SC	6,061	5.1	1,898	1.6	9,531	8.0	63.6	118,697
SD	2,859	2.3	782	0.6	4,162	3.3	68.7	124,560
TN	2,844	3.2	1,585	1.8	4,931	5.5	57.7	89,997
TX	7,325	1.9	3,529	0.9	12,676	3.3	57.8	381,060
UT	4,787	4.8	1,041	1.0	6,835	6.8	70.0	100,440
VT	3,234	4.7	1,315	1.9	4,717	6.9	68.6	68,670
VA	4,565	4.7	742	0.8	6,488	6.6	70.4	98,100
WA	7,568	3.2	3,355	1.4	11,673	4.9	64.8	236,820
WV	3,271	9.9	749	2.3	4,392	13.3	74.5	33,120
WI	2,523	4.9	1,044	2.0	3,963	7.7	63.7	51,300

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
WY	3,168	4.3	332	0.4	4,207	5.7	75.3	74,280
GU	1,206	4.5	289	1.1	2,484	9.4	48.6	26,520
PR	2,646	5.7	410	0.9	3,812	8.2	69.4	46,440
VI	761	2.7	299	1.1	1,242	4.4	61.3	28,140
Minimum	761	1.6	289	0.4	1,242	2.5	48.6	26,520
Maximum	19,374	9.9	9,444	2.4	32,569	13.3	83.2	859,770
Mean	4,672	3.6	1,676	1.3	7,259	5.6	64.8	147,073
Median	3,531	3.5	1,260	1.1	5,793	5.6	64.5	102,897

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	4,675	6.8	924	1.3	5,744	8.4	81.4	68,709
AK	1,000	4.6	123	0.6	1,168	5.4	85.6	21,660
AZ	3,035	6.0	709	1.4	3,992	7.8	76.0	50,880
AR	1,210	6.8	179	1.0	1,452	8.1	83.3	17,820
CA	7,391	6.9	1,604	1.5	10,250	9.6	72.1	106,620
CO	7,469	10.6	695	1.0	8,249	11.7	90.5	70,410
CT	4,207	5.0	995	1.2	5,503	6.6	76.4	83,960
DE	2,467	4.4	512	0.9	3,207	5.7	76.9	56,130
DC	2,350	3.7	378	0.6	2,768	4.3	84.9	63,707
FL	16,887	5.7	2,510	0.8	20,986	7.1	80.5	297,210
GA	1,796	4.7	389	1.0	2,368	6.2	75.8	38,460
HI	4,868	8.1	815	1.4	5,848	9.7	83.2	60,072
ID	2,426	13.0	334	1.8	2,842	15.3	85.4	18,630
IL	2,497	6.5	372	1.0	2,927	7.6	85.3	38,310
IN	3,832	7.6	844	1.7	4,840	9.6	79.2	50,460
IA	3,517	11.6	282	0.9	3,870	12.7	90.9	30,390
KS	6,558	6.0	1,113	1.0	7,729	7.0	84.8	109,799
KY	5,338	5.5	682	0.7	6,094	6.3	87.6	96,934
LA	1,790	5.4	610	1.8	2,462	7.4	72.7	33,180
ME	4,177	8.8	687	1.4	4,997	10.5	83.6	47,430
MD	6,547	6.7	1,118	1.1	8,066	8.2	81.2	98,310
MA	4,223	3.6	1,797	1.5	6,136	5.2	68.8	117,838
MI	7,514	7.9	1,560	1.6	10,129	10.7	74.2	94,560
MN	9,971	7.2	983	0.7	11,668	8.5	85.5	137,940
MS	3,174	9.3	567	1.7	3,786	11.1	83.8	34,200
MO	2,812	8.7	280	0.9	3,168	9.8	88.8	32,400

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	2,408	9.6	180	0.7	2,636	10.5	91.4	25,019
NE	8,993	10.7	1,033	1.2	10,411	12.4	86.4	83,940
NV	2,327	8.7	241	0.9	2,594	9.7	89.7	26,880
NH	3,021	6.6	598	1.3	3,779	8.2	79.9	45,990
NJ	2,631	4.2	481	0.8	3,534	5.7	74.4	62,460
NM	3,100	11.0	612	2.2	3,773	13.4	82.2	28,110
NY	16,466	5.6	4,816	1.6	22,241	7.6	74.0	292,740
NC	4,240	9.2	513	1.1	4,850	10.5	87.4	46,230
ND	3,044	7.4	444	1.1	3,584	8.7	84.9	41,190
OH	4,350	6.3	478	0.7	5,234	7.6	83.1	68,610
OK	3,192	6.5	1,337	2.7	4,745	9.7	67.3	49,054
OR	3,511	4.9	490	0.7	4,040	5.6	86.9	72,207
PA	4,284	7.6	818	1.5	5,321	9.5	80.5	56,220
RI	2,900	5.9	629	1.3	3,715	7.5	78.1	49,260
SC	5,195	9.4	839	1.5	6,214	11.3	83.6	55,155
SD	3,060	6.6	277	0.6	3,385	7.3	90.4	46,593
TN	3,181	6.6	752	1.6	3,982	8.3	79.9	47,850
TX	3,491	6.5	1,191	2.2	4,834	9.0	72.2	53,550
UT	6,471	13.1	509	1.0	7,522	15.3	86.0	49,260
VT	3,260	7.1	403	0.9	3,779	8.2	86.3	46,050
VA	4,132	6.6	499	0.8	4,982	7.9	82.9	62,730
WA	6,755	7.3	1,507	1.6	8,725	9.5	77.4	92,189
WV	4,032	10.1	408	1.0	4,478	11.3	90.0	39,780
WI	2,785	11.0	476	1.9	3,333	13.1	83.6	25,410
WY	1,303	5.0	115	0.4	1,510	5.8	86.3	26,250
GU	373	5.5	59	0.9	464	6.8	80.4	6,780

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	3,222	18.5	201	1.2	3,534	20.2	91.2	17,460
VI	581	6.2	171	1.8	786	8.5	73.9	9,300
Minimum	373	3.7	59	0.4	464	4.3	67.3	6,780
Maximum	16,887	18.5	4,816	2.7	22,241	20.2	91.4	297,210
Mean	4,334	7.5	762	1.2	5,338	9.1	82.0	62,263
Median	3,376	6.7	583	1.1	4,016	8.4	83.3	49,260

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
AL	7,332	9.9	59,135	80.2	7,240	9.8
AK	3,270	2.9	101,322	90.8	6,978	6.3
AZ	15,066	5.4	230,326	81.9	35,858	12.7
AR	7,302	6.4	93,072	81.4	13,956	12.2
CA	10,008	4.6	170,898	78.9	35,738	16.5
CO	11,703	6.5	148,207	81.9	21,110	11.7
CT	15,993	9.9	113,745	70.6	31,451	19.5
DE	2,740	4.6	41,478	70.0	15,062	25.4
DC	5,574	7.0	64,417	80.8	9,719	12.2
FL	28,498	3.3	667,333	77.6	163,939	19.1
GA	5,083	2.8	145,918	79.1	33,409	18.1
HI	6,568	4.3	131,044	84.9	16,768	10.9
ID	4,906	4.6	89,881	84.9	11,053	10.4
IL	7,131	10.2	56,459	80.6	6,430	9.2
IN	14,746	5.7	206,147	79.3	39,207	15.1
IA	6,254	6.9	74,486	81.8	10,279	11.3
KS	10,389	6.7	127,266	81.5	18,475	11.8
KY	6,828	4.1	134,676	80.3	26,256	15.7
LA	10,648	5.4	168,268	84.8	19,414	9.8
ME	9,314	7.9	91,308	77.3	17,548	14.8
MD	23,509	6.8	255,645	74.4	64,556	18.8
MA	8,236	2.9	205,935	73.6	65,714	23.5
MI	7,973	5.7	113,323	81.1	18,504	13.2
MN	9,259	5.3	142,546	80.9	24,475	13.9
MS	5,241	9.1	46,994	82.0	5,095	8.9
MO	7,155	7.4	76,565	79.6	12,420	12.9
MT	5,968	7.6	64,301	82.4	7,793	10.0

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
NE	11,935	9.2	106,110	81.8	11,644	9.0
NV	4,113	5.1	62,363	76.9	14,614	18.0
NH	6,928	8.9	57,428	74.1	13,104	16.9
NJ	7,969	4.0	142,517	72.4	46,404	23.6
NM	5,354	6.3	70,985	83.7	8,501	10.0
NY	41,559	6.8	445,566	72.6	126,555	20.6
NC	5,102	11.0	35,263	75.9	6,105	13.1
ND	4,616	5.8	67,693	85.6	6,741	8.5
OH	11,515	5.0	184,519	80.0	34,636	15.0
OK	7,002	7.2	79,846	81.8	10,712	11.0
OR	2,533	3.4	63,755	84.8	8,861	11.8
PA	4,320	8.4	37,324	72.8	9,656	18.8
RI	5,942	10.1	39,306	67.1	13,371	22.8
SC	11,072	9.3	91,858	77.4	15,767	13.3
SD	4,595	3.7	114,038	91.6	5,927	4.8
TN	7,479	8.3	72,003	80.0	10,515	11.7
TX	17,387	4.6	310,300	81.4	53,373	14.0
UT	7,186	7.2	83,275	82.9	9,979	9.9
VT	6,013	8.8	51,152	74.5	11,505	16.8
VA	6,703	6.8	73,403	74.8	17,994	18.3
WA	16,388	6.9	190,559	80.5	29,873	12.6
WV	5,548	16.8	20,943	63.2	6,629	20.0
WI	4,437	8.6	39,624	77.2	7,239	14.1
WY	4,267	5.7	61,188	82.4	8,825	11.9
GU	2,516	9.5	21,089	79.5	2,915	11.0
PR	4,042	8.7	37,109	79.9	5,289	11.4
VI	1,255	4.5	25,155	89.4	1,730	6.1

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

	ELIG		INELIG		UNKELIG	
State	N	%	N	%	N	%
Minimum	1,255	2.8	20,943	29.8	1,730	4.8
Maximum	41,559	16.8	667,333	91.6	163,939	62.4
Mean	8,786	6.8	115,380	78.6	22,906	14.6
Median	6,965	6.8	81,561	80.3	13,238	12.8

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
AL	5,744	8.4	34,508	50.2	28,457	41.4
AK	1,168	5.4	16,454	76.0	4,038	18.6
AZ	3,992	7.8	23,660	46.5	23,228	45.7
AR	1,452	8.1	8,470	47.5	7,898	44.3
CA	10,250	9.6	43,085	40.4	53,285	50.0
CO	8,249	11.7	31,330	44.5	30,831	43.8
CT	5,503	6.6	29,999	35.7	48,458	57.7
DE	3,207	5.7	24,625	43.9	28,298	50.4
DC	2,768	4.3	34,710	54.5	26,229	41.2
FL	20,986	7.1	143,918	48.4	132,306	44.5
GA	2,368	6.2	18,559	48.3	17,533	45.6
HI	5,848	9.7	25,295	42.1	28,929	48.2
ID	2,842	15.3	7,449	40.0	8,339	44.8
IL	2,927	7.6	18,214	47.5	17,169	44.8
IN	4,840	9.6	21,576	42.8	24,044	47.6
IA	3,870	12.7	14,536	47.8	11,984	39.4
KS	7,729	7.0	70,211	63.9	31,859	29.0
KY	6,094	6.3	46,744	48.2	44,096	45.5
LA	2,462	7.4	16,684	50.3	14,034	42.3
ME	4,997	10.5	20,525	43.3	21,908	46.2
MD	8,066	8.2	40,250	40.9	49,994	50.9
MA	6,139	5.2	58,072	49.3	53,627	45.5
MI	10,129	10.7	48,306	51.1	36,125	38.2
MN	11,668	8.5	67,494	48.9	58,778	42.6
MS	3,786	11.1	17,374	50.8	13,040	38.1
MO	3,168	9.8	15,895	49.1	13,337	41.2

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
MT	2,636	10.5	13,689	54.7	8,694	34.7
NE	10,411	12.4	49,564	59.0	23,965	28.6
NV	2,594	9.7	10,706	39.8	13,580	50.5
NH	3,779	8.2	19,203	41.8	23,008	50.0
NJ	3,534	5.7	26,160	41.9	32,766	52.5
NM	3,773	13.4	14,499	51.6	9,838	35.0
NY	22,241	7.6	123,392	42.2	147,107	50.3
NC	4,850	10.5	19,634	42.5	21,746	47.0
ND	3,584	8.7	22,859	55.5	14,747	35.8
OH	5,234	7.6	32,668	47.6	30,708	44.8
OK	4,745	9.7	29,302	59.7	15,007	30.6
OR	4,040	5.6	38,782	53.7	29,385	40.7
PA	5,321	9.5	23,624	42.0	27,275	48.5
RI	3,715	7.5	19,214	39.0	26,331	53.5
SC	6,214	11.3	24,822	45.0	24,119	43.7
SD	3,385	7.3	27,141	58.3	16,067	34.5
TN	3,982	8.3	21,463	44.9	22,405	46.8
TX	4,834	9.0	24,896	46.5	23,820	44.5
UT	7,522	15.3	23,998	48.7	17,740	36.0
VT	3,779	8.2	20,570	44.7	21,701	47.1
VA	4,982	7.9	27,894	44.5	29,854	47.6
WA	8,725	9.5	34,901	37.9	48,563	52.7
WV	4,478	11.3	15,275	38.4	20,027	50.3
WI	3,333	13.1	12,406	48.8	9,671	38.1
WY	1,510	5.8	17,906	68.2	6,834	26.0
GU	464	6.8	4,577	67.5	1,739	25.6
PR	3,534	20.2	5,857	33.5	8,069	46.2

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
VI	786	8.5	5,956	64.0	2,558	27.5
Minimum	464	4.3	4,577	23.1	1,739	18.6
Maximum	22,241	20.2	143,918	76.0	147,107	69.0
Mean	5,338	9.1	29,052	47.9	27,873	43.0
Median	4,016	8.4	23,242	47.5	23,118	44.6

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
AL	28.6	47.7	37.8
AK	54.6	69.7	57.0
AZ	43.6	41.3	43.3
AR	48.3	46.4	48.0
CA	28.6	36.1	31.1
CO	58.0	50.9	56.0
CT	36.2	32.3	34.9
DE	47.5	38.1	43.0
DC	24.7	49.9	35.9
FL	55.0	44.6	52.4
GA	50.2	41.3	48.6
HI	43.0	43.2	43.0
ID	52.2	47.2	51.4
IL	26.6	47.1	33.9
IN	41.5	41.4	41.5
IA	52.9	55.0	53.4
KS	50.4	60.2	54.5
KY	64.2	47.7	58.2
LA	28.8	42.0	30.7
ME	55.2	45.0	52.2
MD	42.3	39.9	41.7
MA	36.8	37.5	37.0
MI	52.2	45.8	49.6
MN	59.2	49.0	54.7
MS	34.9	51.9	41.2
MO	51.1	52.2	51.4
MT	55.5	59.6	56.5

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
NE	50.5	61.7	54.9
NV	40.3	44.4	41.3
NH	43.5	39.9	42.2
NJ	47.8	35.4	44.8
NM	51.3	53.4	51.8
NY	36.0	36.8	36.3
NC	32.2	46.3	39.3
ND	60.8	54.5	58.6
OH	58.0	45.9	55.2
OK	47.1	46.7	47.0
OR	61.4	51.5	56.6
PA	43.6	41.5	42.5
RI	37.7	36.3	37.1
SC	47.5	47.0	47.3
SD	59.3	59.2	59.3
TN	33.6	42.5	36.7
TX	36.2	40.1	36.7
UT	60.0	55.0	58.4
VT	44.8	45.6	45.1
VA	55.6	43.5	50.9
WA	40.4	36.6	39.3
WV	47.2	44.7	45.8
WI	48.8	51.8	49.8
WY	65.4	63.8	65.0
GU	42.7	59.8	46.1
PR	58.0	49.0	55.6
VI	56.9	53.6	56.1

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
Minimum	24.7	32.3	30.7
Maximum	65.4	69.7	65.0
Mean	46.5	46.9	46.7
Median	47.7	46.3	47.1

Table 6. Response Rates for Landline and Cell Phone Samples

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