Behavioral Risk Factor Surveillance System

2020 Summary Data Quality Report
August 2, 2021

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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 2020 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 2020 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] Each year of data collection since 2011 has included a larger percentage of calls from the cell phone sample. In 2020, a majority of the BRFSS interviews were conducted by cell phone. The annual code books provide information on the number and percentage of calls conducted by landline and cell phone by year.

The measures presented in this document are designed to summarize the quality of the 2020 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 2020 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 determine which telephone numbers are out-of-sample and which telephone numbers represent likely households. The BRFSS calculates likely households and eligible persons using the proportions of eligible households/persons 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 slightly. Overall, BRFSS response rates have leveled off in the past few years, with landline rates declining and cell phone rates improving. In 2020, the screening of eligible landline phone numbers has improved—which may account for a slight improvement in the proportion of numbers identified as working phone numbers in the landline sample. This change would not necessarily increase response rates. The leveling-off of telephone survey response rates is noted for other federal surveys as well—although in one report, authors noted that the accelerated declines in response rates seen in six other HHS surveys were not seen in BRFSS and one other survey.[4]

Table 1.
Examples of Survey Response Rates

Survey	Year(s)	Overall Response Rates
[a] California Health Interview Survey (CHIS)	2019	10.8%
[b] National Health Interview Survey, 2019.	2019	59.1%
[c] American Time Use Survey	2020	39.2%
BRFSS [d]	2020	47.9%

[a] California Health Interview Survey. *CHIS 2019 Methodology Series: Report 4 - Response Rates*. Los Angeles, CA: UCLA Center for Health Policy Research, 2020. P1-11. http://healthpolicy.ucla.edu/chis/design/Documents/CHIS_2019_MethodologyReport4_ResponseRates.pdf. Accessed 3 August 2021

[b] National Center for Health Statistics. National Health Interview Survey, 2019. Public-use data file and documentation. Survey Description Document at https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2019/srvydesc-508.pdf p19. Accessed 3 August 2021

[c] Bureau of Labor Statistics, U.S. Census Bureau. American Time Use Survey User's Guide, 2020 *Understanding ATUS 2003 to 2020.* https://www.bls.gov/tus/atususersguide.pdf P14, table 3.3. Accessed 3 August 2021.

[d] 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.[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] Industry averages for response rates by in-person, telephone, mail and online surveys average 57%, 18%, 50% and 29%, respectively.[6] Despite lower response rates over time, this research supports previous findings[7] 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 2020 was 47.9 and ranged from 34.5 to 67.2.[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 2020 document is available at: https://www.cdc.gov/brfss/annual_data/2020/pdf/2020-sdqr-508.pdf.

BRFSS 2020 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 2020, 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). Partially completed interviews are those that have collected all information needed to weight responses (about 12 minutes into the survey questionnaire, not including time for eligibility screening). The table below illustrates the codes used by the BRFSS in 2020, 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.
2020 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
	2320	Selected respondent physically or mentally unable to complete interview
	2330	Language barrier of selected respondent

Table 2.
2020 Disposition Codes for Landline Telephones and Cellular Telephones

Category	Code	Description
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
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
	4460	Landline telephone number (used for cellular telephone only)
	4500	Non-residence/business
	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 2020 Landline and Cellular Telephone Disposition Codes

Category	Disposition Code Definitions	Formulae Abbreviation
Completed Interviews	1100+1200	COIN
Eligible	1100+1200+2111+2112+2120+2210+2320+2330	ELIG
Contacted Eligible	1100+1200+2111+2112+2120+2210+2320+2330	CONELIG
Terminations and Refusals	2111+2112+2120	TERE

Table 3.
Categories of 2020 Landline and Cellular Telephone Disposition Codes

Category	Disposition Code Definitions	Formulae Abbreviation
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	1,345	3.1	771	1.8	2,230	5.1	60.3	43,770
AK	1,601	2.7	726	1.2	2,686	4.5	59.6	60,000
AZ	2,273	2.5	864	1.0	3,620	4.0	62.8	90,179
AR	2,603	3.6	1,024	1.4	3,973	5.6	65.5	71,550
CA	944	1.9	517	1.1	1,700	3.5	55.5	48,900
CO	2,202	5.0	474	1.1	3,105	7.1	70.9	43,709
CT	2,855	6.9	874	2.1	4,347	10.5	65.7	41,566
DE	833	1.3	384	0.6	1,518	2.4	54.9	64,560
DC	1,100	2.2	463	0.9	1,789	3.6	61.5	50,125
FL	4,142	1.2	2,006	0.6	8,008	2.3	51.7	346,380
GA	3,150	2.1	2,313	1.5	6,318	4.2	49.9	150,870
HI	1,820	3.4	568	1.1	3,097	5.8	58.8	53,340
ID	1,241	2.4	459	0.9	1,751	3.5	70.9	50,694
IL	1,092	3.2	127	0.4	1,229	3.6	88.9	34,260
IN	2,647	2.7	1,354	1.4	4,725	4.9	56.0	96,443
IA	2,005	5.1	668	1.7	2,974	7.5	67.4	39,450
KS	3,465	4.5	1,269	1.6	5,070	6.5	68.3	77,490
KY	1,100	1.6	551	0.8	1,784	2.6	61.7	69,420
LA	1,123	1.6	879	1.2	2,179	3.1	51.5	70,921
ME	6,404	3.2	1,228	0.6	7,927	4.0	80.8	198,379
MD	5,271	4.9	1,804	1.7	8,414	7.9	62.6	106,740
MA	2,262	3.3	359	0.5	2,713	4.0	83.4	67,978
MI	2,205	2.8	711	0.9	3,471	4.4	63.5	79,560
MN	2,973	3.5	831	1.0	4,668	5.4	63.7	85,920
MS	2,308	4.3	762	1.4	3,345	6.2	69.0	53,828
MO	2,890	3.1	771	0.8	3,997	4.4	72.3	91,863

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	1,985	4.5	581	1.3	2,772	6.3	71.6	44,130
NE	4,333	5.2	1,375	1.7	6,592	7.9	65.7	83,129
NV	550	2.7	176	0.9	793	3.9	69.4	20,160
NH	3,115	6.1	826	1.6	4,478	8.8	69.6	50,730
NJ	2,775	2.5	1,616	1.5	5,467	4.9	50.8	111,110
NM	2,783	4.6	1,134	1.9	4,471	7.3	62.2	60,899
NY	5,961	3.9	3,485	2.3	10,928	7.1	54.5	154,080
NC	1,053	4.8	635	2.9	1,848	8.5	57.0	21,720
ND	2,438	3.8	703	1.1	3,404	5.3	71.6	64,600
OH	4,226	1.7	1,461	0.6	7,354	2.9	57.5	251,760
OK	1,423	3.4	642	1.5	2,317	5.5	61.4	42,240
OR	1,045	4.3	87	0.4	1,157	4.8	90.3	24,327
PA	908	2.7	372	1.1	1,385	4.1	65.6	33,840
RI	1,650	5.4	878	2.9	2,907	9.5	56.8	30,450
SC	1,124	2.2	345	0.7	1,566	3.0	71.8	51,840
SD	2,948	4.1	909	1.3	3,988	5.5	73.9	71,938
TN	910	2.6	595	1.7	1,607	4.6	56.6	34,560
TX	1,960	2.0	766	0.8	3,294	3.4	59.5	96,480
UT	2,498	5.0	510	1.0	3,242	6.5	77.1	49,770
VT	3,208	5.2	1,278	2.1	5,022	8.2	63.9	61,140
VA	3,743	3.0	1,271	1.0	6,367	5.0	58.8	126,810
WA	3,952	5.3	1,330	1.8	5,992	8.1	66.0	73,890
WV	2,779	11.1	784	3.1	3,929	15.8	70.7	24,930
WI	1,542	5.8	459	1.7	2,194	8.2	70.3	26,757
WY	2,918	3.5	797	1.0	4,375	5.3	66.7	82,590
GU	1,019	2.7	342	0.9	1,979	5.3	51.5	37,159

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	66	2.4	9	0.3	113	4.1	58.4	2,760
Minimum	66	1.2	9	0.3	113	2.3	49.9	2,760
Maximum	6,404	11.1	3,485	3.1	10,928	15.8	90.3	346,380
Mean	2,354	3.6	870	1.3	3,701	5.6	64.6	73,994
Median	2,262	3.3	766	1.1	3,294	5.1	63.7	60,899

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	3,853	5.2	763	1.0	4,627	6.3	83.3	73,786
AK	2,095	2.7	355	0.5	2,513	3.2	83.4	77,580
AZ	7,786	4.8	1,548	1.0	9,822	6.0	79.3	162,570
AR	2,600	4.6	630	1.1	3,363	5.9	77.3	56,670
CA	2,975	6.8	1,034	2.4	4,136	9.5	71.9	43,680
CO	8,164	6.1	1,315	1.0	9,673	7.2	84.4	134,735
CT	6,676	4.6	2,160	1.5	9,139	6.2	73.0	146,250
DE	3,379	2.6	795	0.6	4,492	3.5	75.2	129,870
DC	2,122	2.6	561	0.7	2,787	3.4	76.1	82,740
FL	6,425	2.1	1,825	0.6	8,956	3.0	71.7	299,160
GA	5,850	3.2	2,108	1.1	8,237	4.5	71.0	184,590
HI	5,835	7.9	938	1.3	6,903	9.3	84.5	73,890
ID	4,644	4.6	472	0.5	5,135	5.1	90.4	101,129
IL	2,476	4.2	287	0.5	2,785	4.8	88.9	58,397
IN	5,951	5.7	1,348	1.3	7,613	7.2	78.2	105,240
IA	8,025	7.2	975	0.9	9,067	8.1	88.5	111,390
KS	7,433	5.1	628	0.4	8,094	5.6	91.8	144,357
KY	2,846	3.1	625	0.7	3,535	3.8	80.5	91,922
LA	3,673	3.3	1,277	1.1	5,007	4.5	73.4	112,172
ME	4,651	3.8	551	0.5	5,220	4.3	89.1	121,165
MD	9,767	5.2	2,063	1.1	12,193	6.5	80.1	187,229
MA	4,623	3.5	672	0.5	5,363	4.0	86.2	133,682
MI	5,140	4.6	849	0.8	6,640	5.9	77.4	112,470
MN	12,372	4.3	1,748	0.6	15,159	5.3	81.6	286,650
MS	4,254	5.9	418	0.6	4,718	6.5	90.2	72,065
MO	6,362	6.4	571	0.6	7,045	7.1	90.3	98,923

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	4,638	6.2	393	0.5	5,064	6.8	91.6	74,285
NE	11,086	6.2	1,387	0.8	12,716	7.1	87.2	179,220
NV	1,879	6.3	202	0.7	2,094	7.1	89.7	29,634
NH	3,638	6.6	642	1.2	4,387	8.0	82.9	54,780
NJ	9,458	3.2	3,250	1.1	13,396	4.5	70.6	300,240
NM	4,386	9.7	845	1.9	5,294	11.7	82.8	45,303
NY	9,130	4.0	2,927	1.3	12,796	5.7	71.4	225,540
NC	4,368	8.2	526	1.0	4,955	9.2	88.2	53,580
ND	2,207	3.5	352	0.6	2,604	4.1	84.8	63,701
OH	10,651	2.8	2,305	0.6	13,946	3.7	76.4	373,890
OK	3,592	5.0	797	1.1	4,443	6.2	80.8	71,648
OR	4,155	5.3	255	0.3	4,426	5.6	93.9	79,004
PA	4,117	4.1	736	0.7	4,935	4.9	83.4	99,989
RI	4,042	5.5	1,014	1.4	5,365	7.2	75.3	74,070
SC	2,667	3.4	342	0.4	3,041	3.8	87.7	79,286
SD	4,051	3.2	477	0.4	4,556	3.6	88.9	125,968
TN	3,564	4.1	1,055	1.2	4,659	5.4	76.5	86,520
TX	8,194	3.5	2,100	0.9	11,123	4.7	73.7	235,098
UT	8,650	8.1	825	0.8	9,591	9.0	90.2	106,980
VT	3,238	6.1	527	1.0	3,836	7.3	84.4	52,740
VA	5,577	3.8	1,082	0.7	7,198	4.9	77.5	147,690
WA	9,100	7.3	1,615	1.3	10,956	8.8	83.1	125,209
WV	3,191	7.9	451	1.1	3,661	9.0	87.2	40,530
WI	3,683	7.0	636	1.2	4,383	8.4	84.0	52,441
WY	1,940	3.8	270	0.5	2,303	4.5	84.2	51,180
GU	1,164	4.0	220	0.8	1,427	4.9	81.6	28,831

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	5,103	16.0	240	0.8	5,409	16.9	94.3	31,980
Minimum	1,164	2.1	202	0.3	1,427	3.0	70.6	28,831
Maximum	12,372	16.0	3,250	2.4	15,159	16.9	94.3	373,890
Mean	5,235	5.2	981	0.9	6,430	6.2	82.5	114,937
Median	4,386	4.6	763	0.8	5,135	5.9	83.3	98,923

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

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
AL	2,230	5.1	31,038	70.9	10,502	24.0
AK	2,686	4.5	51,627	86.0	5,687	9.5
AZ	3,620	4.0	68,887	76.4	17,672	19.6
AR	3,973	5.6	55,240	77.2	12,337	17.2
CA	1,700	3.5	35,778	73.2	11,422	23.4
CO	3,105	7.1	31,924	73.0	8,680	19.9
CT	4,347	10.5	27,435	66.0	9,784	23.5
DE	1,518	2.4	51,080	79.1	11,962	18.5
DC	1,789	3.6	37,262	74.3	11,074	22.1
FL	8,008	2.3	253,918	73.3	84,454	24.4
GA	6,318	4.2	112,032	74.3	32,520	21.6
HI	3,097	5.8	36,669	68.7	13,574	25.4
ID	1,751	3.5	39,908	78.7	9,035	17.8
IL	1,229	3.6	24,924	72.7	8,107	23.7
IN	4,725	4.9	72,090	74.7	19,628	20.4
IA	2,974	7.5	27,717	70.3	8,759	22.2
KS	5,070	6.5	58,548	75.6	13,872	17.9
KY	1,784	2.6	49,645	71.5	17,991	25.9
LA	2,179	3.1	52,909	74.6	15,833	22.3
ME	7,927	4.0	135,187	68.1	55,265	27.9
MD	8,414	7.9	71,033	66.5	27,293	25.6
MA	2,713	4.0	43,728	64.3	21,537	31.7
MI	3,471	4.4	59,761	75.1	16,328	20.5
MN	4,668	5.4	59,225	68.9	22,027	25.6
MS	3,345	6.2	45,673	84.8	4,810	8.9
MO	3,997	4.4	72,328	78.7	15,538	16.9
MT	2,772	6.3	30,494	69.1	10,864	24.6

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

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
NE	6,592	7.9	60,005	72.2	16,532	19.9
NV	793	3.9	14,935	74.1	4,432	22.0
NH	4,478	8.8	34,169	67.4	12,083	23.8
NJ	5,467	4.9	75,326	67.8	30,317	27.3
NM	4,471	7.3	45,692	75.0	10,736	17.6
NY	10,928	7.1	99,119	64.3	44,033	28.6
NC	1,848	8.5	14,767	68.0	5,105	23.5
ND	3,404	5.3	49,790	77.1	11,406	17.7
OH	7,354	2.9	179,482	71.3	64,924	25.8
OK	2,317	5.5	33,112	78.4	6,811	16.1
OR	1,157	4.8	18,681	76.8	4,489	18.5
PA	1,385	4.1	21,237	62.8	11,218	33.2
RI	2,907	9.5	20,146	66.2	7,397	24.3
SC	1,566	3.0	36,183	69.8	14,091	27.2
SD	3,988	5.5	53,655	74.6	14,295	19.9
TN	1,607	4.6	25,190	72.9	7,763	22.5
TX	3,294	3.4	72,871	75.5	20,315	21.1
UT	3,242	6.5	36,888	74.1	9,640	19.4
VT	5,022	8.2	41,418	67.7	14,700	24.0
VA	6,367	5.0	85,280	67.3	35,163	27.7
WA	5,992	8.1	52,935	71.6	14,963	20.3
WV	3,929	15.8	14,947	60.0	6,054	24.3
WI	2,194	8.2	19,234	71.9	5,329	19.9
WY	4,375	5.3	58,519	70.9	19,696	23.8
GU	1,979	5.3	29,803	80.2	5,377	14.5
PR	113	4.1	2,351	85.2	296	10.7
Minimum	113	2.3	2,351	60.0	296	8.9

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

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
Maximum	10,928	15.8	253,918	86.0	84,454	33.2
Mean	3,701	5.6	53,430	72.6	16,863	21.8
Median	3,294	5.1	45,673	72.9	12,083	22.2

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

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
AL	4,627	6.3	31,114	42.2	38,045	51.6
AK	2,513	3.2	63,961	82.4	11,106	14.3
AZ	9,822	6.0	81,948	50.4	70,800	43.6
AR	3,363	5.9	29,439	51.9	23,868	42.1
CA	4,136	9.5	16,768	38.4	22,776	52.1
CO	9,673	7.2	68,441	50.8	56,621	42.0
CT	9,139	6.2	67,486	46.1	69,625	47.6
DE	4,492	3.5	56,724	43.7	68,654	52.9
DC	2,787	3.4	44,360	53.6	35,593	43.0
FL	8,956	3.0	163,078	54.5	127,126	42.5
GA	8,237	4.5	93,500	50.7	82,853	44.9
HI	6,903	9.3	28,699	38.8	38,288	51.8
ID	5,135	5.1	47,783	47.2	48,211	47.7
IL	2,785	4.8	22,717	38.9	32,895	56.3
IN	7,613	7.2	49,369	46.9	48,258	45.9
IA	9,067	8.1	62,168	55.8	40,155	36.0
KS	8,094	5.6	84,087	58.2	52,176	36.1
KY	3,535	3.8	43,829	47.7	44,561	48.5
LA	5,007	4.5	48,669	43.4	58,496	52.1
ME	5,220	4.3	60,302	49.8	55,643	45.9
MD	12,193	6.5	93,798	50.1	81,238	43.4
MA	5,363	4.0	63,995	47.9	64,324	48.1
MI	6,640	5.9	61,250	54.5	44,580	39.6
MN	15,159	5.3	142,490	49.7	129,001	45.0
MS	4,718	6.5	51,647	71.7	15,700	21.8
MO	7,045	7.1	53,988	54.6	37,890	38.3
MT	5,064	6.8	34,147	46.0	35,074	47.2

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

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
NE	12,716	7.1	105,983	59.1	60,521	33.8
NV	2,094	7.1	12,355	41.7	15,185	51.2
NH	4,387	8.0	25,814	47.1	24,579	44.9
NJ	13,396	4.5	129,289	43.1	157,555	52.5
NM	5,294	11.7	24,060	53.1	15,949	35.2
NY	12,796	5.7	94,909	42.1	117,835	52.2
NC	4,955	9.2	22,589	42.2	26,036	48.6
ND	2,604	4.1	36,587	57.4	24,510	38.5
OH	13,946	3.7	197,055	52.7	162,889	43.6
OK	4,443	6.2	42,508	59.3	24,697	34.5
OR	4,426	5.6	31,620	40.0	42,958	54.4
PA	4,935	4.9	41,447	41.5	53,608	53.6
RI	5,365	7.2	31,457	42.5	37,248	50.3
SC	3,041	3.8	37,689	47.5	38,556	48.6
SD	4,556	3.6	83,764	66.5	37,648	29.9
TN	4,659	5.4	37,453	43.3	44,408	51.3
TX	11,123	4.7	110,256	46.9	113,719	48.4
UT	9,591	9.0	52,371	49.0	45,018	42.1
VT	3,836	7.3	24,205	45.9	24,699	46.8
VA	7,198	4.9	70,317	47.6	70,175	47.5
WA	10,956	8.8	56,301	45.0	57,952	46.3
WV	3,661	9.0	16,734	41.3	20,135	49.7
WI	4,383	8.4	28,442	54.2	19,616	37.4
WY	2,303	4.5	36,593	71.5	12,284	24.0
GU	1,427	4.9	19,745	68.5	7,659	26.6
PR	5,409	16.9	10,702	33.5	15,869	49.6
Minimum	1,427	3.0	10,702	33.5	7,659	14.3

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

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
Maximum	15,159	16.9	197,055	82.4	162,889	56.3
Mean	6,430	6.2	57,472	50.0	51,035	43.8
Median	5,135	5.9	48,669	47.7	42,958	45.9

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
AL	45.8	40.3	42.4
AK	54.0	71.4	63.8
AZ	50.5	44.7	46.8
AR	54.2	44.8	50.0
CA	42.6	34.4	38.7
CO	56.8	48.9	50.9
CT	50.2	38.3	40.9
DE	44.7	35.5	38.5
DC	47.9	43.4	45.1
FL	39.1	41.3	40.1
GA	39.1	39.1	39.1
HI	43.8	40.7	42.0
ID	58.2	47.3	51.0
IL	67.8	38.8	49.5
IN	44.6	42.3	43.4
IA	52.4	56.6	55.5
KS	56.1	58.6	57.8
KY	45.7	41.5	43.3
LA	40.0	35.1	37.0
ME	58.3	48.2	54.5
MD	46.6	45.3	45.8
MA	57.0	44.7	48.8
MI	50.5	46.7	48.3
MN	47.4	44.9	45.5
MS	62.8	70.5	67.2
MO	60.1	55.7	57.8
MT	54.0	48.3	50.4
NE	52.7	57.7	56.1

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
NV	54.1	43.8	47.9
NH	53.0	45.7	49.2
NJ	36.9	33.6	34.5
NM	51.3	53.7	52.3
NY	39.0	34.1	36.1
NC	43.6	45.3	44.8
ND	59.0	52.1	55.6
OH	42.6	43.1	42.9
OK	51.5	53.0	52.4
OR	73.7	42.8	50.1
PA	43.8	38.7	40.0
RI	43.0	37.5	39.1
SC	52.3	45.1	47.9
SD	59.2	62.3	61.2
TN	43.9	37.2	39.1
TX	47.0	38.0	40.6
UT	62.1	52.2	55.4
VT	48.5	44.9	46.8
VA	42.5	40.7	41.5
WA	52.6	44.6	47.6
WV	53.6	43.9	47.6
WI	56.3	52.6	53.8
WY	50.8	64.0	55.9
GU	44.0	59.9	51.0
PR	52.1	47.5	47.9
Minimum	36.9	33.6	34.5
Maximum	73.7	71.4	67.2

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
Mean	50.6	46.4	47.8
Median	50.8	44.8	47.9

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