Behavioral Risk Factor Surveillance System

2021 Summary Data Quality Report
August 9, 2022

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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 US Virgin Islands, and Guam.

This *Summary Data Quality Report* presents detailed descriptions of the 2021 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 2021 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 2021, 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 2021 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 2021 response rates using AAPOR Response Rate #4.[3]

Based on 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 represent 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 2021, 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 6 other 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	11.2%
[b] National Health Interview Survey, 2019.	2019	61.1%
[c] Am Time Use Survey	2021	39.4%
BRFSS [d]	2021	44.0%

[a] CHIS 2019 Report 4 Response Rates:
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 10 August 2022.

[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 10 August 2022

[c] Am Time Use Survey
Bureau of Labor Statistics (sponsor)/by the U.S. Census Bureau. American Time Use Survey User's Guide, 2022 *Understanding ATUS 2003 to 2021.* https://www.bls.gov/tus/atususersguide.pdf P14, table 3.3. Accessed 10 August 2022.

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

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 2021 was 44.0 and ranged from 23.5 to 60.5.[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 2021 document is available at: https://www.cdc.gov/brfss/annual_data/2021/pdf/2021-sdqr-508.pdf.

BRFSS 2021 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 2021, 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 2021, and it notes the instances where codes are used only for landline telephone or cellular telephone sample numbers.

The Disposition Code Table below uses terms to define and categorize outcomes, which 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.
2021 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
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.
2021 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
	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 2021 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
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	1,133	2.1	487	0.9	1,729	3.2	65.5	54,680
AK	1,364	1.7	799	1.0	2,477	3.1	55.1	79,950
AZ	2,118	0.6	892	0.3	3,747	1.1	56.5	326,850
AR	2,665	1.8	1,376	0.9	4,769	3.3	55.9	145,350
CA	1,191	1.7	633	0.9	2,064	2.9	57.7	71,459
CO	1,310	3.6	314	0.9	1,919	5.3	68.3	35,971
CT	1,301	3.1	766	1.9	2,440	5.9	53.3	41,370
DE	767	1.3	334	0.6	1,326	2.3	57.8	56,970
DC	802	1.5	456	0.8	1,436	2.6	55.8	54,300
FL	*	*	*	*	*	*	*	*
GA	2,800	1.2	2,817	1.2	6,714	2.8	41.7	237,090
HI	1,800	2.7	701	1.1	3,203	4.9	56.2	65,970
ID	1,444	1.7	271	0.3	1,746	2.1	82.7	84,533
IL	659	1.7	105	0.3	775	2.1	85.0	37,800
IN	2,437	1.8	1,722	1.2	4,924	3.5	49.5	138,804
IA	2,006	4.0	765	1.5	3,087	6.2	65.0	49,650
KS	4,058	3.2	1,589	1.2	6,191	4.9	65.5	127,307
KY	1,510	2.1	588	0.8	2,259	3.2	66.8	70,830
LA	1,031	1.1	827	0.9	1,989	2.2	51.8	91,830
ME	4,774	2.0	707	0.3	5,609	2.4	85.1	236,700
MD	4,892	2.4	2,972	1.5	9,550	4.7	51.2	203,250
MA	1,348	2.6	170	0.3	1,559	3.0	86.5	52,538
MI	2,533	2.7	1,139	1.2	4,172	4.5	60.7	92,400
MN	3,006	2.0	1,160	0.8	5,087	3.3	59.1	152,070
MS	1,197	2.5	318	0.7	1,653	3.4	72.4	48,810
MO	3,326	2.6	1,313	1.0	5,013	4.0	66.3	126,742

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	1,898	2.6	609	0.8	2,758	3.7	68.8	74,041
NE	4,030	4.3	1,248	1.3	6,243	6.7	64.6	93,690
NV	541	2.1	183	0.7	809	3.2	66.9	25,260
NH	3,342	4.3	1,284	1.6	5,368	6.9	62.3	78,360
NJ	1,458	1.9	1,046	1.4	3,079	4.1	47.4	75,120
NM	1,105	3.3	471	1.4	1,796	5.3	61.5	33,990
NY	15,087	2.5	11,382	1.9	31,569	5.2	47.8	605,910
NC	790	3.9	346	1.7	1,287	6.3	61.4	20,400
ND	2,329	3.6	721	1.1	3,257	5.0	71.5	64,596
OH	3,997	0.9	1,718	0.4	7,330	1.6	54.5	447,540
OK	1,154	2.3	533	1.1	1,921	3.8	60.1	50,187
OR	600	4.2	35	0.2	645	4.6	93.0	14,124
PA	892	1.8	383	0.8	1,406	2.8	63.4	49,560
RI	1,052	3.6	661	2.2	2,058	7.0	51.1	29,610
SC	3,506	1.9	2,869	1.5	7,497	4.0	46.8	189,300
SD	2,431	1.8	444	0.3	2,955	2.2	82.3	133,333
TN	740	1.6	621	1.4	1,468	3.3	50.4	45,090
TX	1,957	1.2	1,124	0.7	3,778	2.4	51.8	158,160
UT	1,746	3.5	622	1.3	2,662	5.4	65.6	49,352
VT	1,976	2.2	994	1.1	3,513	4.0	56.2	88,530
VA	3,741	1.2	1,811	0.6	6,923	2.2	54.0	313,110
WA	3,925	2.8	1,871	1.3	6,633	4.7	59.2	140,640
WV	2,489	9.3	650	2.4	3,413	12.8	72.9	26,640
WI	2,006	4.7	719	1.7	3,039	7.1	66.0	42,938
WY	2,355	1.6	940	0.7	3,960	2.7	59.5	144,450
GU	631	1.8	344	1.0	1,343	3.9	47.0	34,155

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	345	2.2	58	0.4	500	3.2	69.0	15,660
VI	198	0.5	149	0.4	361	0.9	54.8	41,520
Minimum	198	0.5	35	0.2	361	0.9	41.7	14,124
Maximum	15,087	9.3	11,382	2.4	31,569	12.8	93.0	605,910
Mean	2,223	2.5	1,077	1.0	3,830	4.0	61.9	108839
Median	1,849	2.1	713	1.0	2,997	3.5	60.1	71,459

*Florida was unable to collect enough BRFSS data in 2021 to meet the minimum requirements for inclusion in the 2021 BRFSS public-use data set.

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	3,364	3.9	643	0.8	4,028	4.7	83.5	85,631
AK	4,024	2.3	905	0.5	5,056	2.9	79.6	173,700
AZ	8,491	2.0	1,209	0.3	9,796	2.4	86.7	415,710
AR	2,662	2.7	707	0.7	3,586	3.6	74.2	98,426
CA	4,650	4.9	978	1.0	5,775	6.1	80.5	94,260
CO	9,311	4.1	1,876	0.8	11,526	5.1	80.8	224,942
CT	7,380	4.2	2,053	1.2	9,851	5.6	74.9	175,920
DE	3,006	1.8	555	0.3	3,598	2.2	83.5	164,850
DC	2,218	2.3	683	0.7	3,014	3.1	73.6	96,690
FL	*	*	*	*	*	*	*	*
GA	5,227	2.2	2,151	0.9	7,832	3.3	66.7	235,920
HI	5,874	8.5	1,102	1.6	7,117	10.3	82.5	68,850
ID	5,325	3.3	565	0.4	5,916	3.7	90.0	159,766
IL	2,345	3.1	426	0.6	2,799	3.7	83.8	75,660
IN	7,632	3.2	2,155	0.9	10,386	4.3	73.5	239,760
IA	8,016	5.4	1,156	0.8	9,308	6.3	86.1	148,800
KS	14,139	5.3	2,102	0.8	16,363	6.1	86.4	267,679
KY	3,979	3.5	658	0.6	4,664	4.2	85.3	112,320
LA	4,078	2.7	1,359	0.9	5,495	3.6	74.2	153,510
ME	7,248	2.2	961	0.3	8,237	2.5	88.0	335,973
MD	11,361	3.8	2,990	1.0	14,793	4.9	76.8	300,501
MA	6,131	2.2	602	0.2	6,835	2.4	89.7	282,834
MI	6,909	3.0	2,109	0.9	9,376	4.1	73.7	227,966
MN	12,643	2.7	1,582	0.3	14,406	3.1	87.8	464,580
MS	3,269	3.9	530	0.6	3,888	4.6	84.1	84,687
MO	9,013	5.4	963	0.6	10,088	6.1	89.3	166,677

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	4,535	3.7	493	0.4	5,053	4.2	89.7	121,743
NE	11,199	5.6	1,590	0.8	13,113	6.5	85.4	201,240
NV	2,248	3.7	324	0.5	2,600	4.3	86.5	60,283
NH	3,312	4.4	818	1.1	4,260	5.6	77.7	75,480
NJ	6,617	2.2	2,390	0.8	9,523	3.2	69.5	299,250
NM	5,397	8.4	1,059	1.7	6,531	10.2	82.6	64,172
NY	24,864	2.4	8,838	0.9	35,846	3.5	69.4	1029930
NC	3,732	6.4	676	1.2	4,490	7.6	83.1	58,740
ND	3,848	3.4	526	0.5	4,414	3.9	87.2	114,024
OH	10,390	2.2	1,772	0.4	12,289	2.6	84.5	472,800
OK	4,237	4.3	1,057	1.1	5,356	5.4	79.1	98,939
OR	4,668	3.5	333	0.2	5,016	3.7	93.1	135,304
PA	5,248	3.5	1,080	0.7	6,408	4.2	81.9	151,320
RI	4,762	4.9	1,379	1.4	6,459	6.7	73.7	96,570
SC	6,623	3.0	2,057	0.9	9,076	4.1	73.0	220,890
SD	4,889	1.7	431	0.2	5,364	1.9	91.1	280,739
TN	3,917	2.7	1,169	0.8	5,133	3.5	76.3	147,541
TX	8,120	2.3	2,451	0.7	11,383	3.2	71.3	353,670
UT	9,079	6.8	1,254	0.9	10,957	8.2	82.9	132,961
VT	4,522	4.1	988	0.9	5,737	5.2	78.8	110,490
VA	5,835	2.5	949	0.4	6,862	3.0	85.0	230,190
WA	9,179	5.9	1,772	1.1	11,159	7.2	82.3	155,250
WV	4,370	7.3	551	0.9	4,949	8.2	88.3	60,150
WI	4,102	7.2	631	1.1	4,886	8.6	84.0	56,580
WY	2,138	3.2	263	0.4	2,415	3.7	88.5	65,820
GU	1,029	3.5	216	0.7	1,314	4.5	78.3	29,040

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

State	COIN		TERE		CONELIG		COOP	Total Sample
	N	%	N	%	N	%	%	
PR	3,804	14.3	185	0.7	4,027	15.2	94.5	26,552
VI	1,323	3.1	398	0.9	1,751	4.2	75.6	42,180
Minimum	1,029	1.7	185	0.2	1,314	1.9	66.7	26,552
Maximum	24,864	14.3	8,838	1.7	35,846	15.2	94.5	1,029,930
Mean	6,081	4.0	1,274	0.8	7,549	4.9	81.7	183,914
Median	4,880	3.5	978	0.8	5,916	4.2	82.9	148,800

*Florida was unable to collect enough BRFSS data in 2021 to meet the minimum requirements for inclusion in the 2021 BRFSS public-use data set.

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
AL	1,729	3.2	41,134	75.2	11,817	21.6
AK	2,477	3.1	69,151	86.5	8,322	10.4
AZ	3,747	1.1	267,706	81.9	55,397	16.9
AR	4,769	3.3	117,585	80.9	22,996	15.8
CA	2,064	2.9	54,334	76.0	15,061	21.1
CO	1,919	5.3	27,147	75.5	6,905	19.2
CT	2,440	5.9	27,788	67.2	11,142	26.9
DE	1,326	2.3	37,175	65.3	18,469	32.4
DC	1,436	2.6	40,353	74.3	12,511	23.0
FL	*	*	*	*	*	*
GA	6,714	2.8	180,078	76.0	50,298	21.2
HI	3,203	4.9	46,858	71.0	15,909	24.1
ID	1,746	2.1	69,905	82.7	12,882	15.2
IL	775	2.1	27,891	73.8	9,134	24.2
IN	4,924	3.5	106,668	76.8	27,212	19.6
IA	3,087	6.2	36,486	73.5	10,077	20.3
KS	6,191	4.9	100,575	79.0	20,541	16.1
KY	2,259	3.2	52,656	74.3	15,915	22.5
LA	1,989	2.2	70,635	76.9	19,206	20.9
ME	5,609	2.4	167,062	70.6	64,029	27.1
MD	9,550	4.7	142,786	70.3	50,914	25.0
MA	1,559	3.0	35,198	67.0	15,781	30.0
MI	4,172	4.5	70,508	76.3	17,720	19.2
MN	5,087	3.3	110,114	72.4	36,869	24.2
MS	1,653	3.4	38,592	79.1	8,565	17.5
MO	5,013	4.0	100,037	78.9	21,692	17.1
MT	2,758	3.7	51,375	69.4	19,908	26.9

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

	ELIG		INELIG		UNKELIG	
State	**N**	**%**	**N**	**%**	**N**	**%**
NE	6,243	6.7	69,145	73.8	18,302	19.5
NV	809	3.2	18,479	73.2	5,972	23.6
NH	5,368	6.9	54,353	69.4	18,639	23.8
NJ	3,079	4.1	53,501	71.2	18,540	24.7
NM	1,796	5.3	26,381	77.6	5,813	17.1
NY	31,569	5.2	432,723	71.4	141,618	23.4
NC	1,287	6.3	14,180	69.5	4,933	24.2
ND	3,257	5.0	46,561	72.1	14,778	22.9
OH	7,330	1.6	338,923	75.7	101,287	22.6
OK	1,921	3.8	40,345	80.4	7,921	15.8
OR	645	4.6	11,230	79.5	2,249	15.9
PA	1,406	2.8	33,413	67.4	14,741	29.7
RI	2,058	7.0	20,299	68.6	7,253	24.5
SC	7,497	4.0	143,215	75.7	38,588	20.4
SD	2,955	2.2	104,678	78.5	25,700	19.3
TN	1,468	3.3	32,984	73.2	10,638	23.6
TX	3,778	2.4	125,223	79.2	29,159	18.4
UT	2,662	5.4	37,878	76.8	8,812	17.9
VT	3,513	4.0	73,077	82.5	11,940	13.5
VA	6,923	2.2	220,018	70.3	86,169	27.5
WA	6,633	4.7	104,100	74.0	29,907	21.3
WV	3,413	12.8	16,214	60.9	7,013	26.3
WI	3,039	7.1	31,560	73.5	8,339	19.4
WY	3,960	2.7	109,047	75.5	31,443	21.8
GU	1,343	3.9	8,278	24.2	24,534	71.8
PR	500	3.2	12,732	81.3	2,428	15.5
VI	361	0.9	38,564	92.9	2,595	6.3

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
Minimum	361	0.9	8,278	24.2	2,249	6.3
Maximum	31,569	12.8	432,723	92.9	141,618	71.8
Mean	3,830	4.0	81,262	74.0	23,747	22.0
Median	2,955	3.5	52,656	74.8	15,909	21.2

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
AL	4,028	4.7	37,226	43.5	44,377	51.8
AK	5,056	2.9	134,728	77.6	33,916	19.5
AZ	9,796	2.4	184,299	44.3	221,615	53.3
AR	3,586	3.6	56,543	57.4	38,297	38.9
CA	5,775	6.1	39,794	42.2	48,691	51.7
CO	11,526	5.1	103,956	46.2	109,460	48.7
CT	9,851	5.6	73,558	41.8	92,511	52.6
DE	3,598	2.2	73,569	44.6	87,683	53.2
DC	3,014	3.1	52,122	53.9	41,554	43.0
FL	*	*	*	*	*	*
GA	7,832	3.3	131,070	55.6	97,018	41.1
HI	7,117	10.3	23,716	34.4	38,017	55.2
ID	5,916	3.7	67,959	42.5	85,891	53.8
IL	2,799	3.7	31,937	42.2	40,924	54.1
IN	10,386	4.3	112,457	46.9	116,917	48.8
IA	9,308	6.3	82,058	55.1	57,434	38.6
KS	16,363	6.1	137,982	51.5	113,334	42.3
KY	4,664	4.2	52,877	47.1	54,779	48.8
LA	5,495	3.6	68,541	44.6	79,474	51.8
ME	8,237	2.5	162,706	48.4	165,030	49.1
MD	14,793	4.9	138,859	46.2	146,849	48.9
MA	6,835	2.4	134,927	47.7	141,072	49.9
MI	9,376	4.1	137,690	60.4	80,900	35.5
MN	14,406	3.1	212,869	45.8	237,305	51.1
MS	3,888	4.6	50,190	59.3	30,609	36.1
MO	10,088	6.1	84,145	50.5	72,444	43.5
MT	5,053	4.2	56,972	46.8	59,718	49.1

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
NE	13,113	6.5	107,738	53.5	80,389	39.9
NV	2,600	4.3	23,417	38.8	34,266	56.8
NH	4,260	5.6	36,992	49.0	34,228	45.3
NJ	9,523	3.2	142,635	47.7	147,092	49.2
NM	6,531	10.2	33,537	52.3	24,104	37.6
NY	35,846	3.5	498,884	48.4	495,200	48.1
NC	4,490	7.6	25,446	43.3	28,804	49.0
ND	4,414	3.9	64,304	56.4	45,306	39.7
OH	12,289	2.6	237,825	50.3	222,686	47.1
OK	5,356	5.4	51,487	52.0	42,096	42.5
OR	5,016	3.7	52,604	38.9	77,684	57.4
PA	6,408	4.2	67,583	44.7	77,329	51.1
RI	6,459	6.7	38,118	39.5	51,993	53.8
SC	9,076	4.1	115,019	52.1	96,795	43.8
SD	5,364	1.9	172,310	61.4	103,065	36.7
TN	5,133	3.5	64,916	44.0	77,492	52.5
TX	11,383	3.2	150,618	42.6	191,669	54.2
UT	10,957	8.2	60,981	45.9	61,023	45.9
VT	5,737	5.2	47,328	42.8	57,425	52.0
VA	6,862	3.0	97,602	42.4	125,726	54.6
WA	11,159	7.2	67,564	43.5	76,527	49.3
WV	4,949	8.2	24,070	40.0	31,131	51.8
WI	4,886	8.6	29,649	52.4	22,045	39.0
WY	2,415	3.7	39,305	59.7	24,100	36.6
GU	1,314	4.5	11,851	40.8	15,875	54.7
PR	4,027	15.2	8,520	32.1	14,005	52.7
VI	1,751	4.2	25,474	60.4	14,955	35.5

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

State	ELIG		INELIG		UNKELIG	
	N	%	N	%	N	%
Minimum	1,314	1.9	8,520	32.1	14,005	19.5
Maximum	35,846	15.2	498,884	77.6	495,200	57.4
Mean	7,549	4.9	89,406	48.2	86,959	46.9
Median	5,916	4.2	67,564	46.9	72,444	49.0

*Florida was unable to collect enough BRFSS data in 2021 to meet the minimum requirements for inclusion in the 2021 BRFSS public-use data set.

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
AL	51.4	40.2	44.6
AK	49.3	64.0	59.4
AZ	46.9	40.5	43.3
AR	47.0	45.3	46.4
CA	45.5	38.9	41.8
CO	55.2	41.5	43.4
CT	39.0	35.5	36.2
DE	39.1	39.1	39.1
DC	43.0	42.0	42.3
FL	*	*	*
GA	32.9	39.3	36.1
HI	42.6	37.0	39.7
ID	70.1	41.6	51.5
IL	64.5	38.5	47.1
IN	39.8	37.6	38.4
IA	51.8	52.9	52.6
KS	55.0	49.8	51.5
KY	51.8	43.7	46.8
LA	41.0	35.8	37.7
ME	62.1	44.8	51.9
MD	38.4	39.3	38.9
MA	60.5	45.0	47.4
MI	49.1	47.5	48.0
MN	44.8	42.9	43.4
MS	59.7	53.7	55.9
MO	55.0	50.5	52.4
MT	50.3	45.7	47.5
NE	51.9	51.3	51.5

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
NV	51.1	37.3	41.4
NH	47.4	42.5	45.0
NJ	35.7	35.3	35.4
NM	51.0	51.6	51.4
NY	36.6	36.0	36.2
NC	46.5	42.4	43.4
ND	55.1	52.5	53.5
OH	42.2	44.7	43.5
OK	50.6	45.4	47.2
OR	78.2	39.6	43.3
PA	44.6	40.0	41.2
RI	38.6	34.0	35.1
SC	37.2	41.0	39.3
SD	66.4	57.7	60.5
TN	38.5	36.2	36.8
TX	42.2	32.7	35.6
UT	53.9	44.8	47.3
VT	48.7	37.9	42.7
VA	39.2	38.6	38.9
WA	46.6	41.7	44.0
WV	53.7	42.6	46.0
WI	53.2	51.2	52.1
WY	46.5	56.1	49.5
GU	13.2	35.5	23.5
PR	58.3	44.6	49.7
VI	51.4	48.8	50.1
Minimum	13.2	32.7	23.5
Maximum	78.2	64.0	60.5

Table 6. Response Rates for Landline and Cell Phone Samples

State	Landline Response Rate	Cell Phone Response Rate	Combined Response Rate
Mean	48.4	43.2	44.6
Median	48.7	42.0	44.0

*Florida was unable to collect enough BRFSS data in 2021 to meet the minimum requirements for inclusion in the 2021 BRFSS public-use data set.

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