



2001

Behavioral Risk Factor Surveillance System

Summary Data Quality Report

August 16, 2002

2001 BRFSS Summary Data Quality Report

This report provides selected statistical indicators of data quality in the Behavioral Risk Factor Surveillance System (BRFSS). The report presents data on four types of measures by state¹:

- (1) Outcome measures, including response rates, which are based on disposition codes.
- (2) Selection biases with respect to gender, age, and race/ethnicity.
- (3) Missing values on income.
- (4) Sampling frame coverage.

The measures in this report are designed to document the quality of BRFSS data.² “Data quality” in this report refers to the accuracy of BRFSS data.

Outcome Measures

The factors affecting the distribution of disposition codes by state may be grouped into differences in telephone systems, sample designs, surveyed populations, and data collection processes. Different outcome measures are variously affected by differences in these factors.

Table 1 presents the frequency distributions of individual disposition codes by state. The percent completes by state is the Efficiency Rate.

Table 2 presents brief definitions of each disposition code.

Table 3.

The categories used in the calculations of the outcome rates in Table 6 are defined below.

Categories of Case Outcomes		
Category	Disposition Code Definition	Format in Formulas
Completed Interview	01	COIN
Eligible and able to complete interview	01+02+07+09+12+13+14	Elig HH
Unknown Eligibility	04+10	Unknown
Ineligible or unable to complete interview	03+05+06+08+11	Ineligible

The BRFSS Cooperation Rate is an outcome rate with the number of completes in the numerator and the number of eligible respondents who are capable of completing the survey in the denominator. Records with disposition codes indicating a respondent who does not speak English—or in some states, English or Spanish—or a respondent with a physical or mental impairment are excluded from the denominator.³ The

¹ In this report, “state” includes the District of Columbia and Puerto Rico.

² The measures in this report are at best only indirect indicators of the quality of the data collection effort or adherence to BRFSS protocols. The *2000 BRFSS Baseline Summary Quality Control Report* presents measures more directly relevant to these latter concerns.

³ Whether or not such respondents are eligible is a matter of perspective. They are eligible in that they are part of the stated target population. They are not eligible in that they are not capable of completing an interview.

denominator of the Cooperation Rate consists of records with disposition codes of 01, 02, 07, 09, 13, 14. Thus, the formula for the BRFSS Cooperation Rate is

$$\left[\frac{COIN}{EligHH} \right]$$

Table 3.

A response rate is an outcome rate with the number of completes in the numerator and an estimate of the number of eligible units in the sample in the denominator. The BRFSS CASRO Response Rate calculation treats telephone numbers used by someone aged 18 years or older who speaks English—or in some states, English or Spanish—well enough to complete the interview and with no physical or mental impairment that prevents completion of the interview as eligible units. Eligible records are records with disposition codes of 01, 02, 07, 09, 12, 13, or 14. Ineligible records are records in which a respondent is unable to complete an interview (those with disposition codes of 11 or 08) or those in which no adult resident uses the number (disposition codes 03, 05, and 06). Added to this total is an estimate of the number of households among the records whose eligibility is undetermined. These are records with disposition codes of 04 or 10. The BRFSS CASRO Rate calculation assumes that the unresolved numbers contain the same percentage of eligible households as the records whose eligibility or ineligibility are determined. Thus, the formula for the BRFSS CASRO Rate is:

$$\left[\frac{COIN}{(EligHH) + \left(\frac{EligHH}{(EligHH) + (Ineligible)} \right) \times Unknown} \right]$$

A response rate is an indicator of the potential for bias in the results of a survey. It does not indicate the actual amount of bias. The actual amount of bias can be conceptualized as a function of two factors—the amount of non-response, which is measured by a response rate, and the differences between the responders and the non-responders. A response rate does not address the latter factor.

Table 4 presents frequency distributions of individual household disposition codes by state. The percent completes by state may be termed the Household Completion Rate. It is the percent of completes among identified households.

Table 5 presents frequency distributions of individual disposition codes by state for listed household telephone numbers.⁴ These distributions may be less subject to the influences of characteristics of the telephone systems and of sample designs than the distributions of all sample records. By definition, all of these numbers were listed household numbers at one time. While states will differ in the extent to which these numbers will have changed status since being listed, the resulting differences should be smaller than the differences among numbers that began with different statuses. Thus, the percent of completes among listed household numbers may be considered an alternative measure of data quality.

⁴ Listed household telephone numbers are identified by the sample provider. This table excludes Minnesota, Puerto Rico, and Wisconsin, for which listed household designations are not available.

Selection Biases

Tables 6 through 13 present data on the differences between BRFSS and population data with respect to gender, age, and race/ethnicity by state. In these tables, BRFSS data are weighted for the characteristics of the sample design—disproportionate sampling by geographic and density strata (where they exist), number of phones, and number of adults in the household.⁵ Because these factors are built into the sample design, they should be adjusted for before comparing survey distributions to population distributions. No definitive standards exist with respect to what constitutes a substantial difference between survey and population percentages. One approach would be to examine the distribution of discrepant values with the purpose of identifying extreme values, or outliers, which may indicate biased data.

Income Missing Values

Table 14 presents the percent missing (Don't know/Not sure or Refused or either) income by state. Income is the variable in the survey data with the largest percentage of missing values. A larger percentage of missing values for income implies lower quality data for income and, by extension, for other variables.

⁵ These factors make up the variable _WT1 in the BRFSS SAS data sets.

Table 1. BRFSS Call Dispositions, Frequency Distribution by State, 2001

State	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
AK	2875	678	30066	2611	4510	52	653	133	15	4403	63	550	0	791	47400
AL	2795	645	7870	562	2604	91	761	39	59	658	139	488	421	312	17444
AR	2928	755	16433	950	3123	14	821	78	93	109	179	337	0	1630	27450
AZ	3264	1071	15387	1227	4070	68	264	109	97	356	49	658	0	1830	28450
CA	4257	1332	16805	2020	6539	114	944	1177	121	972	262	3965	0	3492	42000
CO	2032	425	8323	476	3689	47	545	70	13	58	94	316	0	812	16900
CT	7752	3511	43938	4378	11818	177	1387	430	213	823	254	1496	0	6670	82847
DC	1888	565	15590	2452	6588	37	346	135	36	1232	41	595	0	2195	31700
DE	3514	746	21249	1843	5131	39	1547	102	65	1950	172	595	0	1447	38400
FL	4683	1852	22941	2610	6957	138	434	321	143	766	90	1186	0	4279	46400
GA	4532	1456	22560	1810	8073	183	2300	299	248	588	297	831	0	3219	46396
GU	871	199	17655	796	2582	18	218	201	22	455	17	239	0	277	23550
HI	4500	115	20321	2663	7010	0	21	392	59	107	177	1106	0	1479	37950
IA	3635	602	23784	975	3375	14	1002	81	11	117	187	661	0	755	35199
ID	4833	897	26123	1377	4839	32	840	193	105	291	140	639	0	2090	42399
IL	4010	979	22439	2060	6541	38	722	237	37	1	259	402	0	2925	40650
IN	3993	1042	18967	1408	4485	23	1077	51	74	229	119	649	0	2383	34500
KS	4601	1011	27782	1313	6033	51	644	93	44	713	82	476	0	2757	45600
KY	7532	692	37340	1027	5317	168	3380	137	25	35	805	24	0	1644	58126
LA	5003	1489	25879	2163	7165	154	1495	78	167	362	298	1358	0	2739	48350
MA	8628	4338	77697	5571	16390	151	1442	801	294	3163	344	2009	0	8472	129300
MD	4472	1859	27627	3158	7016	72	803	206	74	2808	137	1024	0	4594	53850
ME	2420	785	12813	884	2180	40	243	26	18	576	95	241	0	1129	21450
MI	3830	847	20438	2246	5883	88	696	132	98	0	182	731	0	3029	38200
MN	3965	472	17686	1153	3505	75	835	93	17	554	98	656	0	891	30000
MO	4178	813	19709	1345	4549	40	1010	34	159	285	139	3153	225	1361	37000
MS	3043	732	12932	695	3210	66	1472	40	110	344	233	189	0	1126	24192
MT	3338	454	22857	592	2671	82	531	10	8	4	184	280	22	317	31350
NC	6205	1020	21190	1918	7566	71	1135	242	74	544	218	1356	0	2261	43800
ND	2510	499	20054	623	2431	16	453	13	32	62	82	183	0	842	27800
NE	3699	455	21113	515	4058	76	403	28	16	195	47	471	0	1324	32400
NH	4068	1416	23429	1923	4763	57	472	77	36	1166	111	553	0	2529	40600
NJ	6018	3226	38438	6245	11199	258	1617	1017	222	2658	203	1590	0	6609	79300
NM	3621	474	13055	1042	3721	28	817	30	61	327	112	668	0	838	24794
NV	2573	211	15482	1750	4084	35	126	333	3	363	89	1153	0	1271	27473
NY	3899	1910	19853	2914	6408	47	859	570	73	762	185	1018	0	4102	42600
OH	3433	1667	18585	1673	4595	48	506	65	92	472	134	592	0	2988	34850
OK	4550	732	21191	1029	3275	76	770	10	56	934	82	764	1	1239	34709
OR	2536	518	11317	823	3201	23	547	34	43	138	75	403	0	1292	20950
PA	3661	955	20046	1941	4910	39	1097	105	75	175	144	707	0	2495	36350
PR	4236	243	6849	2775	1877	3	712	2	5	290	204	0	0	0	17196
RI	4120	1671	25026	1652	4574	71	643	227	104	634	170	556	0	3002	42450
SC	3201	1524	16183	1232	3938	70	556	58	100	318	147	515	0	2158	30000
SD	5119	703	37661	1280	4443	57	590	33	44	209	91	724	0	1096	52050
TN	2924	196	11583	845	1906	111	42	52	22	62	161	409	0	1927	20240
TX	5916	1485	39753	3312	9464	75	2821	111	113	497	268	1282	0	4303	69400
UT	3656	343	16033	1257	3230	26	643	126	30	788	77	451	0	440	27100
VA	2939	615	10618	1260	3980	7	626	213	81	514	140	523	0	1282	22798
VI	2263	306	8170	818	3064	38	715	44	76	46	88	343	0	479	16450
VT	4301	1345	40290	1670	4387	87	435	23	37	421	122	529	0	2053	55700
WA	4207	1177	21200	1458	7372	119	662	391	76	891	209	952	0	2386	41100
WI	3351	1072	12475	899	3549	13	49	30	135	0	52	812	0	1584	24021
WV	3093	373	8271	617	1881	32	543	5	30	104	127	358	0	666	16100
WY	3039	494	15159	794	2867	9	571	37	30	83	76	330	0	911	24400
Cumulative	212510	54992	1166235	92630	272596	3564	44843	9574	4091	34612	8550	42096	669	114722	2061684
Median	3765	770	20050	1361	4464	52	679	93	63	363	139	595	0	1637	35025

Table 2. Summary of 2001 BRFSS Disposition Rules

Code	Rule
1 Completed interview (questions asked through age, race, and sex)	Give final disposition.
2 Refused interview	Give final disposition after second refusal or when a first-time refusal will not be called a second time
3 Non-working number	Usually recognized by a recording or fast-busy signal. Includes "number changed" recordings and numbers that "bridge." Call operator or repair service when in doubt. Give final disposition.
4 Ring no answer	A normal telephone ring which no one answers (answering machines do not count as an answer) to be given final disposition only after (1) 5 calling occasions (each consisting of 3 attempts), and (2) the 5 occasions have a mixture of weekday, weeknight, and weekend calls. If possible, contact the phone company repair service to verify the number is in service.
5 Not a private residence	The person answering identifies the telephone number as a business or says "no" when asked, "Is this a private residence?" Also use this disposition for institutions (government offices, educational facilities, dormitories, nursing homes, hospitals, prisons, etc.), group homes (fraternities and sororities, half-way houses, shelters, etc.), pagers, fax machines, and computer modems. Give final disposition.
6 No eligible respondent at this number	The household does not include anyone 18 years of age or older (this does not mean the adults are away temporarily). Give final disposition.
7 Selected respondent not available during the interviewing period	The selected respondent will not be available or could not be reached during the time you have allotted for the month's interviewing. Give final disposition only when respondent's unavailability is certain or when the same calling requirements for ring-no-answers and busies have been met.
8 Language barrier	The selected respondent does not speak English well enough to be interviewed, and there is not a translated questionnaire and interviewer available for the respective language. Give final disposition.
9 Interview terminated within questionnaire	A "hang up" at some point after the first question has been asked (this does not mean the respondent refused a particular question). Make another attempt to complete questionnaire. Give final disposition if second attempt unsuccessful. If after a second attempt the respondent has completed the interview at least through the age, race, and sex questions, recode as a completed interview.
10 Line busy	To be given final disposition only after (1) 5 calling occasions (each consisting of 3 attempts at ≥ 10 minute intervals), and (2) the 5 occasions have a mixture of weekday, weeknight, and weekend calls. If possible, contact the phone company repair service to verify the number is in service.
11 Respondent unable to communicate due to physical or mental impairment	Example: respondent is deaf. Give final disposition
12 Technological barrier (Answering machine, call blocking, etc.)	To be given final disposition only after (a) 5 calling occasions (each consisting of 3 attempts), and (b) the 5 occasions have a mixture of weekday, weeknight, and weekend calls. One or more attempts reached an answering machine, call blocking, or other automated response but no person was ever spoken to.
13 On "never call" list	To be assigned to (those few) phone numbers where the BRFSS State Coordinator has determined that a phone number should not be called.
14 Hang-up or termination	Give final disposition after second hang-up or refusal or when a first-

before respondent selection	time hang-up or refusal will not be called a second time.
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Table 3. BRFSS CASRO & Cooperation Rates, By State, 2001

State	CASRO	COOPERATION
AK	56.7%	57.4%
AL	54.4%	56.0%
AR	46.4%	47.0%
AZ	48.9%	50.0%
CA	38.0%	42.0%
CO	52.1%	53.1%
CT	39.0%	39.7%
DC	36.8%	37.5%
DE	47.3%	48.0%
FL	40.1%	41.1%
GA	37.9%	38.6%
GU	54.3%	54.9%
HI	70.8%	72.9%
IA	59.4%	60.5%
ID	54.3%	55.1%
IL	45.8%	46.2%
IN	45.7%	46.6%
KS	50.3%	50.8%
KY	56.7%	56.7%
LA	44.6%	45.9%
MA	36.7%	37.2%
MD	37.2%	37.9%
ME	52.1%	52.7%
MI	44.2%	45.1%
MN	62.8%	64.2%
MO	49.3%	53.9%
MS	46.6%	46.9%
MT	70.8%	71.5%
NC	56.2%	58.0%
ND	57.5%	57.9%
NE	61.8%	62.7%
NH	47.1%	47.7%
NJ	33.3%	34.0%
NM	60.6%	62.3%
NV	58.9%	61.5%
NY	35.1%	36.0%
OH	38.9%	39.5%
OK	60.6%	61.9%
OR	50.4%	51.4%
PA	43.3%	44.2%
PR	81.5%	81.5%
RI	42.6%	43.2%
SC	41.7%	42.5%
SD	66.8%	67.8%
TN	56.1%	57.2%
TX	39.7%	40.4%
UT	70.3%	71.5%
VA	51.8%	53.0%
VI	57.7%	58.9%
VT	52.1%	52.6%
WA	48.3%	49.4%
WI	52.3%	54.1%
WV	64.3%	65.7%
WY	59.4%	60.2%
Median	51.1%	52.7%
Minimum	33.3%	34.0%
Maximum	81.5%	81.5%

Table 4. BRFSS Household Dispositions, Frequency Distribution by State, 2001

State	1	2	6	7	8	9	11	12	13	14	Total
AK	2875	678	52	653	133	15	63	550	0	791	5810
AL	2795	645	91	761	39	59	139	488	421	312	5750
AR	2928	755	14	821	78	93	179	337	0	1630	6835
AZ	3264	1071	68	264	109	97	49	658	0	1830	7410
CA	4257	1332	114	944	1177	121	262	3965	0	3492	15664
CO	2032	425	47	545	70	13	94	316	0	812	4354
CT	7752	3511	177	1387	430	213	254	1496	0	6670	21890
DC	1888	565	37	346	135	36	41	595	0	2195	5838
DE	3514	746	39	1547	102	65	172	595	0	1447	8227
FL	4683	1852	138	434	321	143	90	1186	0	4279	13126
GA	4532	1456	183	2300	299	248	297	831	0	3219	13365
GU	871	199	18	218	201	22	17	239	0	277	2062
HI	4500	115	0	21	392	59	177	1106	0	1479	7849
IA	3635	602	14	1002	81	11	187	661	0	755	6948
ID	4833	897	32	840	193	105	140	639	0	2090	9769
IL	4010	979	38	722	237	37	259	402	0	2925	9609
IN	3993	1042	23	1077	51	74	119	649	0	2383	9411
KS	4601	1011	51	644	93	44	82	476	0	2757	9759
KY	7532	692	168	3380	137	25	805	24	0	1644	14407
LA	5003	1489	154	1495	78	167	298	1358	0	2739	12781
MA	8628	4338	151	1442	801	294	344	2009	0	8472	26479
MD	4472	1859	72	803	206	74	137	1024	0	4594	13241
ME	2420	785	40	243	26	18	95	241	0	1129	4997
MI	3830	847	88	696	132	98	182	731	0	3029	9633
MN	3965	472	75	835	93	17	98	656	0	891	7102
MO	4178	813	40	1010	34	159	139	3153	225	1361	11112
MS	3043	732	66	1472	40	110	233	189	0	1126	7011
MT	3338	454	82	531	10	8	184	280	22	317	5226
NC	6205	1020	71	1135	242	74	218	1356	0	2261	12582
ND	2510	499	16	453	13	32	82	183	0	842	4630
NE	3699	455	76	403	28	16	47	471	0	1324	6519
NH	4068	1416	57	472	77	36	111	553	0	2529	9319
NJ	6018	3226	258	1617	1017	222	203	1590	0	6609	20760
NM	3621	474	28	817	30	61	112	668	0	838	6649
NV	2573	211	35	126	333	3	89	1153	0	1271	5794
NY	3899	1910	47	859	570	73	185	1018	0	4102	12663
OH	3433	1667	48	506	65	92	134	592	0	2988	9525
OK	4550	732	76	770	10	56	82	764	1	1239	8280
OR	2536	518	23	547	34	43	75	403	0	1292	5471
PA	3661	955	39	1097	105	75	144	707	0	2495	9278
PR	4236	243	3	712	2	5	204	0	0	0	5405
RI	4120	1671	71	643	227	104	170	556	0	3002	10564
SC	3201	1524	70	556	58	100	147	515	0	2158	8329
SD	5119	703	57	590	33	44	91	724	0	1096	8457
TN	2924	196	111	42	52	22	161	409	0	1927	5844
TX	5916	1485	75	2821	111	113	268	1282	0	4303	16374
UT	3656	343	26	643	126	30	77	451	0	440	5792
VA	2939	615	7	626	213	81	140	523	0	1282	6426
VI	2263	306	38	715	44	76	88	343	0	479	4352
VT	4301	1345	87	435	23	37	122	529	0	2053	8932
WA	4207	1177	119	662	391	76	209	952	0	2386	10179
WI	3351	1072	13	49	30	135	52	812	0	1584	7098
WV	3093	373	32	543	5	30	127	358	0	666	5227
WY	3039	494	9	571	37	30	76	330	0	911	5497
Cumulative	212510	54992	3564	44843	9574	4091	8550	42096	669	114722	495611
Median	3765	770	52	679	93	63	139	595	0	1637	8254

Table 5. BRFSS Call Dispositions, Listed Telephone Numbers, Frequency Distribution by State, 2001*

State	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
AK	1854	426	1126	207	347	28	379	81	9	55	42	227	0	486	5267
AL	1942	456	850	82	241	64	444	19	36	11	109	142	284	211	4891
AR	2135	580	1241	182	251	8	563	57	73	9	149	176	0	1182	6606
AZ	1846	583	1691	203	353	41	130	49	54	27	30	262	0	913	6182
CA	2186	690	1429	273	945	32	431	521	60	23	146	630	0	1430	8796
CO	1172	260	686	97	282	19	297	26	8	13	56	166	0	487	3569
CT	5465	2475	3132	557	1173	90	888	264	129	37	196	729	0	4284	19419
DC	960	270	841	97	179	9	160	56	11	1	22	142	0	588	3336
DE	2380	480	834	429	719	14	900	56	39	27	104	371	0	892	7245
FL	2767	1082	3102	415	889	85	245	156	82	6	61	465	0	2259	11614
GA	2844	968	2279	292	838	94	1127	163	152	22	213	389	0	2059	11440
HI	2455	44	1475	761	707	0	9	180	19	7	114	376	0	756	6903
IA	2930	496	1229	201	244	5	720	38	10	17	152	386	0	598	7026
ID	3696	687	1693	248	482	23	610	110	74	9	112	348	0	1610	9702
IL	2394	566	1182	188	310	13	365	128	18	0	179	168	0	1556	7067
IN	2853	757	1405	225	424	16	710	28	52	11	88	354	0	1684	8607
KS	3456	747	1597	207	481	19	430	64	27	28	67	213	0	1934	9270
KY	5404	513	2719	403	533	102	1963	76	20	11	597	13	0	1178	13532
LA	3424	1043	2415	464	632	79	978	49	112	19	226	668	0	1836	11945
MA	5503	2783	3388	625	1199	88	861	447	174	52	251	764	0	4815	20950
MD	2843	1147	1714	440	582	34	443	98	39	21	97	418	0	2428	10304
ME	1957	642	966	337	322	32	185	18	13	16	82	161	0	843	5574
MI	2552	600	1252	424	419	45	440	86	59	0	133	383	0	1993	8386
MN	2984	375	1030	201	323	31	556	40	10	21	83	236	0	622	6512
MO	3005	580	1054	302	454	15	655	18	108	29	115	378	131	924	7768
MS	2241	545	1318	137	330	31	721	25	83	7	197	90	0	828	6553
MT	2534	337	1177	143	291	47	360	5	8	0	137	131	13	222	5405
NC	4017	675	2046	345	647	33	630	133	43	28	141	534	0	1443	10715
ND	2023	408	891	103	154	10	337	9	27	1	64	91	0	689	4807
NE	2785	322	1298	79	428	43	257	15	8	9	40	186	0	834	6304
NH	3068	1072	1439	486	608	42	348	55	21	13	93	333	0	1746	9324
NJ	3114	1660	2365	570	878	82	759	524	100	16	110	544	0	3107	13829
NM	2266	306	1081	166	291	9	483	16	38	9	73	337	0	546	5621
NV	936	85	597	232	695	5	39	91	1	47	37	338	0	430	3533
NY	2471	1198	1695	377	564	26	504	333	44	23	121	378	0	2331	10065
OH	2172	1060	1265	178	341	23	288	37	48	5	93	269	0	1673	7452
OK	3237	540	1499	237	271	35	490	5	47	24	68	210	0	866	7529
OR	1525	324	788	118	259	14	317	19	31	7	47	182	0	765	4396
PA	2504	650	719	247	457	18	629	62	52	13	100	350	0	1622	7423
RI	2794	1169	1601	266	516	45	430	160	70	16	129	301	0	1926	9423
SC	2059	1009	1750	214	402	41	328	29	64	44	118	228	0	1387	7673
SD	4032	572	2163	261	342	32	394	16	35	14	74	470	0	850	9255
TN	1461	101	971	168	216	57	19	28	10	4	93	179	0	964	4271
TX	3535	898	2834	546	761	38	1519	57	67	19	189	503	0	2595	13561
UT	2479	248	937	181	193	13	375	50	15	30	57	131	0	285	4994
VA	1984	432	755	150	271	3	361	124	58	17	106	207	0	848	5316
VT	3601	1138	1806	480	641	72	362	18	25	5	109	348	0	1655	10260
WA	2643	751	1647	130	595	31	368	199	43	16	143	272	0	1364	8202
WI	2500	808	1057	162	358	10	27	15	94	0	47	252	0	1151	6481
WV	2558	297	552	181	200	23	405	2	26	9	110	171	0	513	5047
WY	2368	384	1108	106	249	7	402	18	21	7	66	183	0	690	5609
Cumulative	137914	36239	75689	14123	24287	1776	25641	4873	2467	855	5986	15783	428	68898	414959
Median	2534	580	1298	225	419	31	430	55	39	14	106	272	0	1151	7423

*Guam, Puerto Rico, and Virgin Islands are excluded.

Table 6. Percentage of Females in BRFSS and Population Data by State, 2001

State	BRFSS Percent	Population Percent	Difference
Tennessee	67.37	52.53	14.85
Puerto Rico	64.12	52.95	11.17
Georgia	61.98	52.08	9.90
Nebraska	61.56	51.88	9.67
Louisiana	62.28	52.63	9.65
Alabama	62.43	52.81	9.63
Rhode Island	62.38	52.79	9.59
Mississippi	62.31	52.92	9.39
North Carolina	61.61	52.23	9.38
Arkansas	61.68	52.50	9.18
California	59.53	50.41	9.12
Delaware	61.27	52.27	9.00
Oklahoma	60.99	52.09	8.90
Kentucky	61.15	52.28	8.87
Guam	56.14	47.53	8.62
Michigan	60.37	52.11	8.25
Ohio	60.65	52.56	8.09
Kansas	59.64	51.58	8.06
South Carolina	60.36	52.40	7.96
Missouri	60.44	52.48	7.95
Arizona	58.88	51.19	7.70
West Virginia	60.30	52.74	7.56
Texas	58.81	51.33	7.48
Indiana	59.58	52.20	7.38
Hawaii	56.96	49.63	7.33
Washington	58.24	51.05	7.18
Maryland	59.26	52.17	7.09
New Mexico	58.52	51.47	7.05
New Jersey	59.37	52.32	7.05
Oregon	58.48	51.43	7.05
Illinois	59.03	52.05	6.98
Iowa	59.15	52.19	6.96
Florida	59.13	52.23	6.90
North Dakota	57.53	50.66	6.87
Vermont	58.38	51.66	6.72
Pennsylvania	59.52	52.80	6.72
Virgin Islands	61.29	54.75	6.54
Colorado	57.48	51.01	6.47
Connecticut	58.68	52.24	6.44
South Dakota	57.71	51.39	6.32
Montana	57.37	51.18	6.19
Idaho	57.17	50.99	6.18
Massachusetts	58.73	52.57	6.16
Virginia	57.77	51.63	6.14
Wyoming	56.60	50.57	6.03
New Hampshire	57.52	51.53	6.00
New York	58.66	52.78	5.88
Minnesota	57.15	51.49	5.66
Maine	57.48	51.95	5.53
Alaska	52.73	47.98	4.75
District of Columbia	58.53	54.12	4.41
Wisconsin	55.86	51.70	4.17
Utah	54.79	51.22	3.57
Nevada	49.13	49.75	-0.62
Median	59.08	52.08	7.07

Table 7. Percentage of People Aged 18–24 In BRFSS and Population Data by State, 2001

State	BRFSS Percent	Population Percent	Difference
Florida	8.39	9.86	-1.47
Missouri	11.06	12.57	-1.51
Colorado	10.48	12.02	-1.54
Oregon	9.54	11.74	-2.20
Louisiana	11.71	14.01	-2.30
Nevada	8.78	11.17	-2.38
Guam	13.32	15.77	-2.45
Alaska	10.43	12.99	-2.56
Arizona	9.96	12.72	-2.76
California	9.82	12.62	-2.80
Idaho	10.06	13.03	-2.97
Utah	12.86	15.84	-2.98
North Dakota	11.35	14.36	-3.00
Washington	9.01	12.11	-3.10
District of Columbia	9.27	12.45	-3.18
Ohio	9.64	12.88	-3.24
Wyoming	8.95	12.24	-3.29
New Jersey	7.49	10.96	-3.46
Illinois	9.20	12.70	-3.49
Nebraska	9.46	12.98	-3.52
Wisconsin	9.34	12.94	-3.60
Kansas	9.48	13.14	-3.67
New York	8.18	11.86	-3.68
Arkansas	8.85	12.73	-3.88
Tennessee	8.79	12.76	-3.97
Texas	9.57	13.61	-4.04
Indiana	9.37	13.51	-4.14
New Mexico	8.62	12.85	-4.23
Oklahoma	8.79	13.04	-4.25
Georgia	9.11	13.40	-4.28
Pennsylvania	7.92	12.22	-4.30
Maryland	7.33	11.69	-4.36
North Carolina	8.83	13.22	-4.39
Connecticut	6.93	11.36	-4.43
Alabama	9.05	13.49	-4.43
Minnesota	7.92	12.37	-4.45
Hawaii	7.36	11.82	-4.46
Virginia	8.34	12.83	-4.50
Delaware	8.65	13.29	-4.64
Iowa	8.56	13.25	-4.70
Michigan	8.43	13.14	-4.70
Montana	7.34	12.10	-4.76
South Carolina	8.62	13.76	-5.14
Massachusetts	7.66	12.82	-5.16
South Dakota	7.93	13.23	-5.30
Kentucky	7.54	13.15	-5.61
Virgin Islands	9.15	14.88	-5.73
New Hampshire	6.93	12.85	-5.92
Mississippi	8.84	14.76	-5.92
Maine	6.57	12.52	-5.95
West Virginia	6.53	12.59	-6.06
Rhode Island	6.60	13.09	-6.49
Vermont	7.02	13.84	-6.81
Puerto Rico	8.81	17.35	-8.54
Median	8.82	12.86	-4.19

Table 8. Percentage of People Aged 25–34 in BRFSS and Population Data, by State, 2001

State	BRFSS Percent	Population Percent	Difference
Guam	26.29	21.15	5.14
District of Columbia	22.62	18.92	3.69
New York	20.52	17.91	2.61
Massachusetts	19.94	17.71	2.23
New Jersey	19.43	17.58	1.85
Colorado	20.62	19.03	1.59
Oregon	18.73	17.14	1.59
Utah	20.95	19.51	1.44
Indiana	18.31	17.50	0.81
Illinois	19.00	18.21	0.79
Washington	18.75	17.98	0.78
North Carolina	18.65	18.16	0.49
Kansas	18.21	17.77	0.45
Tennessee	18.09	17.67	0.43
Mississippi	19.09	18.71	0.38
Connecticut	17.31	16.98	0.33
South Carolina	18.78	18.51	0.27
California	19.71	19.58	0.13
Wisconsin	17.43	17.43	0.00
Idaho	17.77	17.82	-0.04
Rhode Island	16.63	16.71	-0.08
Virgin Islands	18.74	18.84	-0.10
Georgia	19.46	19.61	-0.15
Pennsylvania	16.14	16.44	-0.30
Ohio	17.04	17.36	-0.32
Vermont	16.51	16.91	-0.40
Texas	19.88	20.29	-0.41
Florida	16.31	16.75	-0.44
Louisiana	18.41	19.01	-0.60
Alabama	17.35	18.03	-0.68
Kentucky	16.52	17.51	-0.99
Minnesota	17.73	18.79	-1.06
Arkansas	16.29	17.42	-1.13
Virginia	17.49	18.80	-1.31
West Virginia	15.10	16.43	-1.34
North Dakota	16.18	17.60	-1.42
Nevada	16.48	18.05	-1.57
Hawaii	17.09	18.69	-1.60
Maryland	16.91	18.53	-1.62
Nebraska	15.90	17.53	-1.63
Delaware	16.02	17.80	-1.78
Michigan	16.11	17.94	-1.83
New Hampshire	16.32	18.18	-1.86
Oklahoma	15.82	17.69	-1.87
Maine	14.88	16.90	-2.02
Wyoming	16.03	18.15	-2.13
Iowa	14.53	16.76	-2.23
Arizona	16.33	18.59	-2.26
Missouri	14.96	17.46	-2.50
Montana	13.75	16.92	-3.17
South Dakota	14.16	17.61	-3.45
Puerto Rico	15.53	19.23	-3.70
Alaska	17.81	21.59	-3.78
New Mexico	15.30	19.28	-3.98
Median	17.33	17.93	-0.42

Table 9. Percentage of People Aged 35–44 in BRFSS and Population Data by State, 2001

State	BRFSS Percent	Population Percent	Difference
Wisconsin	24.11	20.38	3.74
Rhode Island	23.88	20.71	3.18
New Hampshire	24.63	21.61	3.03
North Dakota	21.63	19.41	2.22
Massachusetts	22.96	20.83	2.13
New Jersey	22.98	21.02	1.96
Ohio	21.91	19.98	1.92
Guam	25.60	23.75	1.85
Minnesota	22.55	20.70	1.85
Virgin Islands	21.79	20.08	1.71
New York	22.49	20.90	1.59
Maine	21.98	20.56	1.42
West Virginia	19.56	18.20	1.36
Texas	22.55	21.33	1.22
Maryland	23.52	22.37	1.16
Michigan	21.67	20.53	1.14
Kansas	21.43	20.31	1.12
South Dakota	20.51	19.42	1.09
Connecticut	22.34	21.27	1.07
Georgia	22.73	21.70	1.03
Arkansas	19.71	18.68	1.03
Hawaii	21.53	20.54	0.99
Iowa	19.72	18.76	0.96
Tennessee	21.07	20.14	0.93
Virginia	22.56	21.63	0.93
South Carolina	21.12	20.34	0.78
Idaho	20.77	20.01	0.77
Indiana	20.79	20.03	0.75
Colorado	23.67	22.94	0.73
Alabama	20.18	19.50	0.68
Alaska	26.12	25.49	0.63
Delaware	21.14	20.51	0.63
Vermont	21.58	20.99	0.59
Washington	22.22	21.65	0.57
Puerto Rico	19.17	18.60	0.57
Pennsylvania	19.91	19.48	0.43
North Carolina	20.77	20.35	0.42
Nevada	22.23	21.81	0.42
Mississippi	19.78	19.38	0.41
Nebraska	19.95	19.76	0.20
Oklahoma	19.56	19.50	0.06
Florida	19.03	19.01	0.02
Louisiana	20.51	20.53	-0.03
Montana	19.74	19.90	-0.16
Illinois	20.65	20.82	-0.17
Kentucky	19.76	20.12	-0.36
California	22.03	22.48	-0.45
Utah	20.92	21.43	-0.50
New Mexico	20.71	21.50	-0.79
Wyoming	20.24	21.10	-0.86
Missouri	18.81	19.92	-1.11
Oregon	19.01	20.70	-1.70
Arizona	17.98	20.52	-2.53
District of Columbia	18.96	21.81	-2.85
Median	21.13	20.53	0.76

Table 10. Percentage of People Aged 45–54 in BRFSS and Population Data by State, 2001

State	BRFSS Percent	Population Percent	Difference
Alaska	24.00	19.64	4.36
Hawaii	22.33	18.50	3.84
Vermont	23.32	19.65	3.67
Wyoming	23.72	20.11	3.62
Montana	22.53	19.74	2.79
Michigan	21.49	19.08	2.41
New Mexico	20.68	18.44	2.24
Virgin Islands	21.65	19.57	2.08
Maine	21.32	19.41	1.91
District of Columbia	20.34	18.48	1.86
North Dakota	19.84	18.07	1.77
Arkansas	19.71	17.99	1.71
Alabama	20.25	18.59	1.66
Puerto Rico	18.30	16.77	1.52
Virginia	20.79	19.36	1.43
Washington	21.04	19.65	1.39
Rhode Island	19.47	18.20	1.26
Pennsylvania	19.58	18.45	1.14
Georgia	20.10	18.97	1.13
West Virginia	20.37	19.24	1.13
South Carolina	20.03	18.95	1.07
Kansas	19.26	18.24	1.02
South Dakota	19.12	18.11	1.02
Maryland	20.53	19.63	0.90
New Hampshire	20.26	19.36	0.89
Mississippi	18.76	17.91	0.85
Florida	18.15	17.32	0.84
Wisconsin	19.70	18.91	0.79
Illinois	19.48	18.76	0.72
Delaware	19.10	18.39	0.71
Nevada	20.68	19.98	0.69
Indiana	19.56	18.96	0.60
Missouri	18.81	18.38	0.43
New York	19.26	18.89	0.38
Oregon	20.15	19.79	0.36
Massachusetts	19.11	18.76	0.36
Minnesota	19.19	18.94	0.25
Kentucky	19.17	18.97	0.20
Ohio	19.20	19.04	0.16
Nebraska	18.57	18.59	-0.02
Oklahoma	18.35	18.43	-0.08
Louisiana	18.21	18.33	-0.12
Connecticut	19.45	19.60	-0.15
Texas	17.92	18.21	-0.29
Tennessee	18.91	19.25	-0.34
Iowa	17.96	18.35	-0.38
Utah	18.03	18.44	-0.42
New Jersey	18.79	19.33	-0.53
North Carolina	18.26	18.85	-0.60
California	18.35	18.99	-0.64
Arizona	17.37	18.22	-0.85
Colorado	18.45	19.35	-0.89
Guam	17.68	18.85	-1.17
Idaho	17.98	19.41	-1.43
Median	19.46	18.90	0.81

Table 11. Percentage of People Aged 55–64 in BRFSS and Population Data by State, 2001

State	BRFSS Percent	Population Percent	Difference
Puerto Rico	15.91	12.66	3.25
Arizona	15.07	12.01	3.07
Kentucky	15.24	12.55	2.69
Virgin Islands	14.27	11.86	2.42
Tennessee	14.98	12.63	2.35
New Mexico	14.08	11.82	2.26
Vermont	14.49	12.25	2.23
Maine	14.50	12.38	2.13
New Hampshire	13.82	12.10	1.71
Montana	14.41	12.73	1.68
Mississippi	13.34	11.83	1.52
Iowa	13.81	12.32	1.49
Arkansas	14.34	12.89	1.45
Missouri	14.07	12.63	1.45
Oklahoma	14.00	12.60	1.40
Nevada	14.15	12.84	1.31
Michigan	13.52	12.28	1.24
South Carolina	13.25	12.07	1.18
Pennsylvania	14.07	12.93	1.14
Virginia	13.10	12.03	1.07
Alaska	12.24	11.18	1.06
Texas	12.59	11.54	1.05
South Dakota	12.66	11.63	1.03
Maryland	13.22	12.22	1.00
Louisiana	12.69	11.78	0.91
California	12.14	11.28	0.86
Connecticut	13.56	12.70	0.86
North Carolina	13.28	12.44	0.84
Delaware	13.23	12.49	0.74
Georgia	12.56	11.87	0.68
Wyoming	13.06	12.41	0.65
Oregon	13.25	12.60	0.65
Utah	11.41	10.79	0.62
Illinois	12.82	12.25	0.57
Rhode Island	12.33	11.77	0.56
Minnesota	12.61	12.10	0.51
West Virginia	13.87	13.36	0.51
Idaho	12.83	12.44	0.38
Alabama	12.84	12.56	0.28
Indiana	12.57	12.33	0.24
Nebraska	11.90	11.94	-0.05
Colorado	11.86	11.91	-0.05
North Dakota	11.27	11.36	-0.09
Kansas	11.67	11.77	-0.10
Massachusetts	11.68	11.86	-0.18
New York	12.36	12.60	-0.24
Wisconsin	11.79	12.03	-0.24
District of Columbia	11.86	12.26	-0.40
Florida	12.30	12.99	-0.69
Ohio	11.80	12.50	-0.70
Hawaii	12.53	13.51	-0.98
Washington	11.27	12.26	-0.99
Guam	9.18	10.23	-1.05
New Jersey	11.30	12.87	-1.57
Median	12.95	12.26	0.85

Table 12. Percentage of People Aged 65 or Older in BRFSS and Population Data by State, 2001

State	BRFSS Percent	Population Percent	Difference
Puerto Rico	22.24	15.38	6.86
South Dakota	24.67	19.99	4.68
Nebraska	23.28	19.20	4.08
Oklahoma	22.79	18.73	4.06
West Virginia	24.02	20.17	3.85
New Mexico	19.94	16.12	3.82
Iowa	24.32	20.56	3.76
Kentucky	21.35	17.70	3.65
Arizona	21.51	17.94	3.56
Montana	22.11	18.61	3.50
Delaware	20.94	17.52	3.43
Minnesota	20.00	17.10	2.90
California	17.90	15.05	2.85
Missouri	21.52	19.03	2.48
Idaho	19.70	17.29	2.41
North Carolina	19.19	16.96	2.23
Mississippi	19.36	17.41	1.94
Texas	16.90	15.02	1.88
Alabama	19.46	17.83	1.63
Maine	19.79	18.24	1.55
Nevada	17.53	16.15	1.38
Hawaii	18.20	16.95	1.25
Wyoming	17.24	15.99	1.25
Illinois	18.43	17.27	1.16
Utah	15.13	14.00	1.13
Maryland	16.66	15.57	1.09
Pennsylvania	21.55	20.47	1.08
Indiana	18.51	17.67	0.84
Louisiana	17.13	16.34	0.79
New Hampshire	16.62	15.90	0.72
Virginia	16.06	15.34	0.72
Michigan	17.73	17.03	0.70
Georgia	15.09	14.45	0.64
Connecticut	18.67	18.08	0.58
Ohio	18.79	18.24	0.55
Oregon	18.57	18.02	0.55
Washington	16.83	16.36	0.47
New Jersey	18.48	18.25	0.23
Tennessee	17.78	17.56	0.23
Kansas	18.95	18.77	0.18
South Carolina	16.46	16.37	0.09
Arkansas	20.25	20.29	-0.04
Florida	24.00	24.07	-0.07
Rhode Island	19.34	19.52	-0.17
Vermont	16.02	16.36	-0.34
North Dakota	18.65	19.20	-0.55
Alaska	8.17	9.10	-0.93
Massachusetts	17.01	18.02	-1.01
Colorado	13.73	14.76	-1.03
Wisconsin	17.28	18.32	-1.04
District of Columbia	14.72	16.07	-1.34
New York	15.34	17.83	-2.50
Virgin Islands	11.84	14.78	-2.94
Guam	6.89	10.24	-3.35
Median	18.54	17.47	0.96

Table 13. Percentage of White Non-Hispanic People in BRFSS and Population Data* by State, 2001

State	BRFSS Percent	Population Percent	Difference
Maryland	74.52	64.12	10.40
California	61.38	51.72	9.66
District of Columbia	41.05	32.24	8.80
Nevada	77.03	68.84	8.19
New York	72.19	65.10	7.09
Hawaii	36.49	29.82	6.67
Utah	91.06	86.67	4.39
South Carolina	73.78	69.40	4.38
Texas	60.84	56.57	4.27
Arizona	73.01	68.81	4.20
New Mexico	53.11	49.27	3.83
Delaware	78.92	75.11	3.81
Washington	86.14	82.39	3.75
Connecticut	84.31	80.67	3.64
Missouri	89.18	85.67	3.50
Illinois	74.50	71.24	3.26
Georgia	68.11	65.52	2.58
Kansas	88.10	85.65	2.44
South Dakota	93.33	90.92	2.42
Virginia	74.78	72.60	2.18
Florida	70.75	68.58	2.16
North Carolina	75.16	73.06	2.10
Pennsylvania	87.90	85.96	1.94
Minnesota	92.56	90.68	1.88
Kentucky	92.14	90.54	1.60
Colorado	79.28	77.70	1.59
Idaho	91.81	90.24	1.57
Mississippi	66.35	64.83	1.52
Tennessee	82.87	81.50	1.37
Wyoming	92.09	90.93	1.16
Iowa	95.24	94.15	1.09
Louisiana	66.79	65.73	1.06
Oklahoma	79.72	78.77	0.95
Rhode Island	86.21	85.47	0.74
Nebraska	89.89	89.43	0.46
Indiana	87.94	87.57	0.37
North Dakota	93.58	93.75	-0.17
Arkansas	81.43	81.64	-0.21
Oregon	86.01	86.52	-0.50
Alabama	72.70	73.24	-0.53
Vermont	96.06	97.19	-1.13
New Hampshire	94.63	96.03	-1.40
Michigan	79.62	81.30	-1.69
Ohio	83.71	85.87	-2.16
Maine	94.90	97.51	-2.60
Alaska	68.80	72.61	-3.81
Wisconsin	85.99	89.83	-3.84
Massachusetts	81.32	85.17	-3.85
West Virginia	89.62	95.39	-5.76
New Jersey	62.04	68.88	-6.84
Montana	84.20	91.98	-7.78
Median	81.43	81.50	1.59

*Puerto Rico, Guam & Virgin Islands are excluded.

**The race variable used in 2001 is completely different than those used in previous years.

Table 14. Percentage of Respondents With Income Response “Unknown” (77), “Refused” (99), and Combined, by State, 2001

State	Percent Don't Know/Not sure	Percent Refused	Percent Combined
Kentucky	10.29	18.77	29.06
Hawaii	8.02	19.67	27.69
Tennessee	10.12	17.07	27.19
Montana	9.50	13.54	23.04
Delaware	5.66	16.28	21.94
Oklahoma	9.36	10.37	19.74
Nebraska	6.60	12.73	19.33
North Carolina	6.32	12.41	18.73
Florida	6.71	10.61	17.32
Mississippi	9.76	7.23	16.99
Arizona	6.77	9.90	16.67
New Jersey	7.05	9.41	16.45
Connecticut	5.48	10.94	16.42
Rhode Island	6.21	10.00	16.21
Louisiana	7.98	7.74	15.71
Kansas	6.32	9.17	15.50
Michigan	5.95	9.45	15.40
New York	5.98	9.13	15.11
South Carolina	6.69	8.40	15.09
Massachusetts	6.08	8.89	14.97
Georgia	7.24	7.48	14.72
Guam	9.99	4.71	14.70
Maine	6.28	8.35	14.63
Maryland	4.18	10.13	14.31
New Hampshire	5.46	8.41	13.86
Ohio	5.04	8.62	13.66
Virgin Islands	9.85	3.71	13.57
Iowa	5.25	8.31	13.56
Alabama	5.69	7.76	13.45
District of Columbia	5.67	7.63	13.29
West Virginia	8.76	4.43	13.19
Minnesota	7.79	5.40	13.19
Virginia	7.49	5.34	12.83
Missouri	5.91	6.89	12.81
South Dakota	5.67	6.68	12.35
Nevada	4.59	7.58	12.16
Texas	6.51	5.36	11.87
Indiana	5.03	6.54	11.57
Vermont	5.12	6.44	11.56
Pennsylvania	4.92	6.42	11.34
Arkansas	5.77	5.53	11.30
Washington	3.87	7.39	11.27
New Mexico	6.08	4.69	10.77
Illinois	3.94	6.63	10.57
Puerto Rico	9.35	1.20	10.55
Colorado	4.18	6.10	10.29
Utah	4.65	5.42	10.07
Alaska	5.77	4.17	9.95
Idaho	5.09	4.82	9.91
Wisconsin	2.86	6.27	9.13
Wyoming	4.18	4.71	8.88
Oregon	5.28	3.51	8.79
California	2.70	5.94	8.64
North Dakota	3.51	4.90	8.41
Median	5.97	7.53	13.57