



# **1993 BRFSS SUMMARY QUALITY CONTROL REPORT**



## BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM QUALITY CONTROL DOCUMENTATION

### RESPONSE RATES

The response rate measures the extent to which interviews were completed from among the telephone numbers selected for the sample. The higher the response rate, the lower the potential will be for bias in the data.

No definitive formula for response rate estimates exists. The two estimates that are used for BRFSS provide a combination of monitoring information that are useful for program management. The formulas for each, translated into BRFSS call disposition codes, are as follows:

CASRO: This response rate formula, developed by the Council of American Survey Research Organizations (CASRO), apportions dispositions with unknown eligibility status (ring-no-answer [04] and busy (10)) to dispositions representing eligible respondents in the same proportion as exists among calls of known status (all other BRFSS call dispositions). The resulting estimate reflects telephone sampling efficiency and the degree of cooperation among eligibles contacted.

$$\frac{(01+02+07+09) + \frac{01}{(01+02+07+09)} \times (04 + 10)}{(01+02+07+09) + (03+05+06+08+11)}$$

Upper Bound: The most liberal of response rate formulas, the upper bound calculation includes only refusals (02s), terminations (09s), and completed interviews Ols. The resulting estimate reflects the cooperation of eligibles contacted and is not affected by differences in telephone sampling efficiency.

$$\frac{01}{01+02+09}$$

Because the rules of replacement are disregarded during wind-down interviewing (see page 3), total response rates for a survey period will not accurately reflect performance under the rules of replacement during regular mode interviewing. Therefore, the 1991 and 1992 response rate estimates included in this report have been calculated using only the records dispositioned during regular mode interviewing. Response rate estimates calculated for previous years included wind-down records.

### OTHER IMPORTANT QUALITY CONTROL INDICATORS

Survey Efficiency: The efficiency rate used for BRFSS is the percentage of all numbers called (excluding numbers rejected during Waksberg prescreening) that resulted in completed interviews. This indicator is directly related to the percent of telephone numbers in the survey area that are assigned to households. The degree to which interviewers adhere to survey procedures and gain respondent cooperation also affects efficiency. This percentage should remain static unless there is a change in the phone companies' assignment of phone numbers in the survey area, a change in sampling design, or a substantial change in interviewer performance.

$$\frac{01}{\text{Total Telephone Numbers Used}}$$

Percent Ols on Day One: The objective for completed interviews on the first day of the interviewing period is 33% of the total sample. This percentage reflects the degree of *success* reaching the telephones in the sample. When using Waksberg cluster sampling, 33% of the telephone numbers have been identified *as* private residences through prescreening, thus the goal of 33%. A broader objective, directly related to this, is to strive to call, at least once, all available numbers on each interview occasion, including the first. The number and percentage of completes by interviewing date are included in the monthly quality control reports prepared by CDC.

Wind-Down: In order to terminate data collection activities within the allotted time period each month, wind-down procedures (i.e., suspension of the rules of replacement) are permitted once 95 percent of the sample has been completed. Each interview completed in the wind-down mode should be coded as such. Generally, if the percentage of wind-down interviews is greater than five percent, the survey supervisor is going into wind-down too early. The greater the proportion of interviews completing in wind-down mode, the greater the potential is for bias in the survey results. This is because data collected during wind-down is reflective only of those respondents who are easiest to reach. Respondents who are more difficult to reach may differ significantly from those who are easier to reach.

Respondent Sex Distribution: The standard sex distribution within a population is approximately 52 percent female and 48 percent male. Survey samples with a respondent sex distribution that differs substantially from the norm may produce biased estimates of risk factor prevalences.

Substantially skewed sex distributions suggest that interviewing staff may not be adhering to respondent selection procedures. Sex distribution percentages are included in the monthly quality control reports prepared by CDC.

Refused Interview: The percentage of refusals (02s) of total dispositions in a given interviewing period is an indicator of both interviewer performance and degree of potential bias in the survey data. Ten percent' refusals or less in any given survey is a generally accepted standard.

Ring-No-Answer: The percentage of ring-no-answers (04s) reflects how many attempts are made and with what time variation on unanswered phone numbers. The objective for 04s is 10%' or less of total dispositions. States that exceed this percentage may not be following prescribed survey procedures.

No Eligible Respondent Could be Reached Durin<sup>g</sup> Interview Period: This disposition (07) is used most often in wind-down and is therefore reflective of the proportion of calling done during wind-down. It also reflects the diligence of efforts to contact eligibles whose availability is limited. The objective for 07s is 3%' or less of total dispositions. Those states that exceed this percentage may need to extend their interviewing period.

Line Busy: This disposition (10) should be infrequent. The objective is 0.3%' or less. A higher percentage than 0.3 may indicate that survey guidelines are not being fully adhered to.

Because this percentage is affected by the efficiency of the sampling methodology (i.e., the number of 03 [nonworking] and 05 [nonresidential] dispositions that occur), comparisons between surveys with different sampling methods may not be meaningful. However, for a particular survey, month-to-month and year-to-year changes in this percentage are important to monitor.

## **BRESS CALL DISPOSITION CODES**

- 01 - Completed interview
- 02 - Refused interview
- 03 - Nonworking number
- 04 - Ring-no-answer
- 05 - Business phone
- 06 - No eligible respondent at this number
- 07 - No eligible respondent available during interviewing period
- 08 - Language barrier
- 09 - Interview terminated
- 10 - Busy
- 11 - Respondent unable to communicate due to physical or mental impairment

**BRFSS CALL DISPOSITIONS**  
**FREQUENCY DISTRIBUTION BY STATE, 1993**

State	1		2		3		4		5		6		7		8		9		10		11		TOTAL No
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	
AK	1534	17.1	284	3.2	5406	60.2	523	5.8	921	10.3	12	0.1	246	2.7	24	0.3	3	0.0	14	0.2	16	0.2	8983
AL	2193	58.0	81	2.1	916	24.2	143	3.8	326	8.6	8	0.2	53	1.4	3	0.1	2	0.1	2	0.1	54	1.4	3781
AR	1764	39.7	475	10.7	911	20.5	455	10.2	474	10.7	24	0.5	178	4.0	8	0.2	4	0.1	12	0.3	137	3.1	4442
AZ	1685	30.9	665	12.2	1856	34.0	511	9.4	477	8.7	47	0.9	126	2.3	13	0.2	11	0.2	13	0.2	56	1.0	5460
CA	3733	24.5	1093	7.2	4023	26.4	2778	18.2	1711	11.2	58	0.4	976	6.4	465	3.1	75	0.5	168	1.1	144	0.9	15224
CO	1802	35.1	241	4.7	1196	23.3	417	8.1	1007	19.6	49	1.0	299	5.8	24	0.5	9	0.2	16	0.3	75	1.5	5135
CT	1810	52.3	290	8.4	264	7.6	760	21.9	234	6.8	11	0.3	21	0.6	13	0.4	14	0.4	43	1.2	4	0.1	3464
DC	1505	29.1	176	3.4	1806	35.0	485	9.4	887	172.0	10	0.2	166	3.2	30	0.6	3	0.1	24	0.5	74	1.4	5166
DE	2112	42.0	229	4.6	1071	21.3	670	13.3	624	12.4	62	1.2	149	3.0	19	0.4	16	0.3	10	0.2	67	1.3	5029
FL	3093	33.5	847	9.2	2074	22.4	1095	11.8	1232	13.3	215	2.3	428	4.6	34	0.4	29	0.3	14	0.2	182	2.0	9243
GA	2233	34.9	811	12.7	1792	28.0	518	8.1	773	12.1	11	0.2	194	3.0	24	0.4	3	0.0	23	0.4	23	0.4	6405
HI	2155	25.6	541	6.4	2181	25.9	1326	15.8	1286	15.3	80	1.0	459	5.5	226	2.7	6	0.1	75	0.9	80	1.0	8415
IA	1800	42.8	307	7.3	1156	27.5	374	8.9	321	7.6	8	0.2	166	3.9	15	0.4	15	0.4	19	0.5	28	0.7	4209
ID	1808	33.4	375	6.9	1543	28.5	649	12.0	617	11.4	31	0.6	73	1.3	42	0.8	28	0.5	98	1.8	148	2.7	5412
IL	2200	27.0	364	4.5	2758	33.8	253	3.1	1587	19.5	69	0.8	399	4.9	251	3.1	6	0.1	2	0.0	261	3.2	8150
IN	2080	44.6	271	5.8	1382	29.6	304	6.5	340	7.3	14	0.3	207	4.4	7	0.2	2	0.0	4	0.1	55	1.2	4666
KS	1440	56.3	85	3.3	370	14.5	287	11.2	206	8.0	16	0.6	111	4.3	9	0.4	0	0.0	5	0.2	31	1.2	2560
KY	2423	35.0	284	4.1	2290	33.0	568	8.2	627	9.0	63	0.9	540	7.8	14	0.2	2	0.0	23	0.3	97	1.4	6931
LA	1653	33.3	562	11.3	1151	23.2	757	15.2	464	9.3	85	1.7	139	2.8	31	0.6	51	1.0	40	0.8	36	0.7	4969
MA	1581	34.6	674	14.7	999	21.9	243	5.3	831	18.2	58	1.3	92	2.0	8	0.2	26	0.6	18	0.4	40	0.9	4570
MD	4386	28.7	1305	8.5	3583	23.4	2242	14.7	2606	17.0	73	0.5	804	5.3	94	0.6	38	0.2	54	0.4	106	0.7	15291
ME	1260	35.7	248	7.0	1115	31.6	378	10.7	335	9.5	30	0.8	124	3.5	4	0.1	4	0.1	15	0.4	17	0.5	3530
MI	2414	25.1	835	8.7	2783	29.0	1278	13.3	1235	12.9	82	0.9	840	8.7	22	0.2	17	0.2	65	0.7	35	0.4	9606
MN	3412	44.9	509	6.7	1820	24.0	540	7.1	757	10.0	49	0.6	384	5.1	16	0.2	47	0.6	16	0.2	42	0.6	7592
MO	1514	29.0	704	13.5	1284	24.6	979	18.8	505	9.7	14	0.3	65	1.2	7	0.1	10	0.2	31	0.6	103	2.0	5216
MS	1584	41.2	359	9.3	848	22.1	352	9.2	352	9.2	7	0.2	212	5.5	7	0.2	2	0.1	40	1.0	82	2.1	3845
MT	1189	36.1	113	3.4	969	29.4	308	9.4	421	12.8	26	0.8	187	5.7	4	0.1	11	0.3	4	0.1	60	1.8	3292
NC	2340	30.3	542	7.0	2645	34.3	842	10.9	942	12.2	14	0.2	287	3.7	20	0.3	2	0.0	29	0.4	55	0.7	7718
ND	1803	47.7	110	2.9	1025	27.1	201	5.3	379	10.0	18	0.5	195	5.2	2	0.1	0	0.0	6	0.2	44	1.2	3783
NE	1807	28.6	324	5.1	2555	40.4	607	9.6	644	10.2	17	0.3	273	4.3	19	0.3	2	0.0	19	0.3	56	0.9	6323
NH	1500	28.8	476	9.1	1846	35.4	458	8.8	687	13.2	74	1.4	112	2.1	10	0.2	5	0.1	0	0.0	44	0.8	5212
NJ	1517	52.0	249	8.5	237	8.1	646	22.1	199	6.8	15	0.5	13	0.4	11	0.4	13	0.4	15	0.5	4	0.1	2919
NM	1293	29.3	774	17.5	783	17.7	686	15.5	653	14.8	12	0.3	144	3.3	21	0.5	0	0.0	11	0.2	42	1.0	4419
NV	1800	54.0	213	6.4	345	10.4	259	7.8	316	9.5	124	3.7	92	2.8	90	2.7	0	0.0	52	1.6	40	1.2	3331
NY	2403	29.9	664	8.3	2230	27.8	1027	12.8	949	11.8	22	0.3	362	4.5	237	3.0	11	0.1	8	0.1	117	1.5	8030
OH	1402	34.5	581	14.3	586	14.4	825	20.3	335	8.2	3	0.1	224	5.5	8	0.2	12	0.3	40	1.0	50	1.2	4066
OK	1512	42.7	256	7.2	965	27.2	320	9.0	345	9.7	16	0.5	69	1.9	12	0.3	2	0.1	18	0.5	30	0.8	3545
OR	2968	35.2	903	10.7	1706	20.3	832	9.9	1333	15.8	24	0.3	373	4.4	82	1.0	61	0.7	43	0.5	99	1.2	8424
PA	2433	36.3	971	14.5	1738	25.9	245	3.7	1053	15.7	76	1.1	64	1.0	0	0.0	49	0.7	10	0.1	65	1.0	6704
RI	1800	40.7	470	10.6	1019	23.0	247	5.6	734	16.6	22	0.5	37	0.8	33	0.7	13	0.3	10	0.2	41	0.9	4426
SC	2113	26.2	496	6.2	2451	30.4	1457	18.1	837	10.4	191	2.4	340	4.2	13	0.2	8	0.1	118	1.5	37	0.5	8061
SD	1798	53.1	163	4.8	648	19.1	293	8.7	257	7.6	2	0.1	174	5.1	3	0.1	3	0.1	1	0.0	42	1.2	3384
TN	3057	39.3	821	10.5	1809	23.2	1090	14.0	708	9.1	19	0.2	149	1.9	23	0.3	1	0.0	48	0.6	61	0.8	7786
TX	2496	28.3	868	9.9	1867	21.2	1530	17.4	1088	12.4	55	0.6	686	7.8	25	0.3	6	0.1	62	0.7	123	1.4	8806
UT	1800	31.7	301	5.3	1595	28.1	385	6.8	1155	20.3	23	0.4	263	4.6	54	1.0	4	0.1	21	0.4	82	1.4	5683
VA	1799	39.0	429	9.3	994	21.5	390	8.5	588	12.7	15	0.3	206	4.5	45	1.0	20	0.4	40	0.9	87	1.9	4613
VT	1882	44.0	266	6.2	637	14.9	549	12.8	591	13.8	136	3.2	129	3.0	6	0.1	3	0.1	23	0.5	55	1.3	4277
WA	2586	41.0	988	15.7	973	15.4	346	5.5	824	13.1	48	0.8	258	4.1	112	1.8	62	1.0	14	0.2	100	1.8	6311
WI	1567	27.5	379	6.6	2758	48.4	148	2.6	706	12.4	65	1.1	20	0.4	0	0.0	19	0.3	14	0.2	27	0.5	5703
WV	2425	43.1	501	8.9	1264	22.5	610	10.8	501	8.9	5	0.1	211	3.8	5	0.1	1	0.0	28	0.5	74	1.3	5625
CUM	102464	34.2	24473	8.2	80223	26.8	33186	11.1	36980	12.3	2208	0.7	12319	4.1	2245	0.7	731	0.2	1478	0.5	3428	1.1	299735
MED	1805	35.1	450	7.3	1333	24.4	521	9.5	649	11.3	24.0	0.5	183	4.0	18	0.3	7	0.1	19	0.2	56	1.2	

**BRFSS CASRO RESPONSE RATE ESTIMATES  
BY STATE, 1989-1993**

State	1989		1990		1991*		1992*		1993*	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AK	NA	NA	NA	NA	77.5	Y	77.3	Y	75.1	Y
AL	98	Y	92.6	Y	43.7**	N	91.9	Y	91.1	Y
AR	NA	NA	NA	NA	73.6	N	NA	NA	69.7	N
AZ	60	N	63.9	N	70.1	N	70.6	N	64.2	N
CA	64	N	62.4	N	69.3	N	72.3	N	63.5	N
CO	NA	NA	73.4	N	82.1	Y	81.6	Y	75.8	Y
CT	51	N	58.7	N	70.0	N	58.3	N	65.1	N
DC	74	N	68.2	N	68.7	N	69.3	N	79.1	Y
DE	NA	NA	37.9	N	73.8	N	75.0	Y	73.6	N
FL	64	N	64.6	N	37.7**	N	64.6	N	66.0	N
GA	73	N	76.8	Y	70.5	N	67.0	N	63.3	N
HI	63	N	61.2	N	68.2	N	71.2	N	61.9	N
IA	70	N	71.7	N	73.3	N	80.7	Y	78.4	Y
ID	66	N	66.5	N	74.6	N	81.2	Y	73.6	N
IL	64	N	71.8	N	70.3	N	70.4	N	71.3	N
IN	78	Y	81.8	Y	83.4	Y	82.5	Y	80.1	Y
KS	NA	NA	NA	NA	NA	NA	82.4	Y	81.2	Y
KY	68	N	67.6	N	71.8	N	73.7	N	73.8	N
LA	NA	NA	NA	NA	NA	NA	17.9	N	64.1	N
MA	47	N	56.5	N	60.6	N	59.9	N	62.8	N
MD	62	N	60.1	N	58.2	N	62.3	N	58.2	N
ME	66	N	73.5	N	75.2	Y	76.3	Y	73.6	N
MI	55	N	54.1	N	50.2	N	57.4	N	50.6	N
MN	72	N	76.2	Y	77.3	Y	75.4	Y	74.9	N
MO	67	N	64.1	N	64.2	N	67.0	N	62.5	N
MS	NA	NA	68.1	N	69.0	N	67.4	N	73.6	N
MT	72	N	72.9	N	77.5	Y	76.1	Y	75.8	Y
NC	64	N	68.7	N	71.3	N	72.1	N	69.4	N
ND	83	Y	73.7	N	83.7	Y	86.6	Y	85.3	Y
NE	64	N	64.4	N	72.8	N	79.0	Y	75.9	Y
NH	65	N	69.4	N	70.9	N	70.0	N	65.4	N
NJ	NA	NA	NA	NA	41.2	N	52.1	N	65.5	N
NM	60	N	61.2	N	70.8	N	63.5	N	53.7	N
NV	NA	NA	NA	NA	NA	NA	74.9	N	77.5	Y
NY	50	N	59.4	N	71.8	N	68.2	N	65.4	N
OH	54	N	57.7	N	69.2	N	59.8	N	59.4	N
OK	66	N	59.7	N	74.0	N	72.6	N	82.2	Y
OR	61	N	63.0	N	66.3	N	65.4	N	65.6	N
PA	54	N	62.1	N	64.9	N	65.5	N	66.5	N
RI	65	N	64.9	N	72.9	N	74.7	N	73.1	N
SC	87	Y	64.6	N	67.3	N	63.1	N	66.0	N
SD	84	Y	82.4	Y	83.0	Y	82.8	Y	81.7	Y
TN	68	N	64.9	N	65.9	N	68.8	N	68.2	N
TX	66	N	64.5	N	61.5	N	58.1	N	54.6	N
UT	61	N	67.3	N	39.6**	N	80.1	Y	76.1	Y
VA	53	N	68.4	N	72.4	N	66.0	N	72.7	N
VT	NA	NA	65.8	N	72.9	N	69.6	N	71.5	N
WA	65	N	61.1	N	60.7	N	60.7	N	62.6	N
WI	79	Y	78.1	Y	76.2	Y	74.3	N	76.7	Y
WV	69	N	68.8	N	75.3	Y	77.3	Y	77.7	Y
MEDIAN	65	N	65.4	N	70.8	N	70.6	N	71.4	N
RANGE	47-98	6 of 40	37.9-92.6	8 of 44	37.7-83.7	10 of 47	17.9-91.9	16 of 49	50.6-91.1	16 of 50

\*Excluding wind-down records

\*\*Query CATI pilot site

**BRFSS UPPER BOUND RESPONSE RATE ESTIMATES  
BY STATE, 1989-1993**

State	1989		1990		1991*		1992*		1993*	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AK	NA	NA	NA	NA	89.3	N	86.4	N	85.8	N
AL	99	Y	97.3	Y	93.1**	Y	94.7	Y	96.5	Y
AR	NA	NA	NA	NA	80.7	N	NA	NA	79.6	N
AZ	84	N	84.1	N	80.7	N	78.1	N	71.5	N
CA	83	N	82.1	N	79.9	N	80.7	N	78.5	N
CO	NA	NA	82.4	N	88.3	N	89.1	N	88.4	N
CT	63	N	64.9	N	81.6	N	81.1	N	85.6	N
DC	92	Y	87.1	N	80.5	N	83.6	N	90.7	Y
DE	NA	NA	80.4	N	93.6	Y	93.2	Y	89.9	N
FL	83	N	82.4	N	82.5**	N	80.7	N	79.0	N
GA	88	N	88.4	N	87.7	N	86.1	N	73.2	N
HI	79	N	80.6	N	81.9	N	82.9	N	81.1	N
IA	88	N	90.2	Y	88.9	N	89.4	N	86.0	N
ID	79	N	90.7	Y	94.8	Y	94.8	Y	82.3	N
IL	83	N	85.3	N	84.5	N	83.8	N	85.0	N
IN	94	Y	92.3	Y	91.3	Y	89.6	N	88.7	N
KS	NA	NA	NA	NA	NA	NA	90.8	Y	95.2	Y
KY	91	Y	88.5	N	86.4	N	88.4	N	89.2	N
LA	NA	NA	NA	NA	NA	NA	42.2	N	75.2	N
MA	64	N	64.1	N	65.2	N	65.3	N	69.3	N
MD	79	N	84.9	N	78.0	N	84.0	N	76.7	N
ME	84	N	86.9	N	84.9	N	85.5	N	84.0	N
MI	81	N	91.7	Y	93.0	Y	79.3	N	73.9	N
MN	86	N	88.8	N	87.5	N	87.3	N	86.1	N
MO	82	N	78.9	N	73.4	N	77.1	N	72.1	N
MS	NA	NA	82.0	N	79.8	N	78.7	N	83.2	N
MT	89	N	90.9	Y	90.6	Y	89.6	N	90.2	Y
NC	84	N	84.7	N	84.1	N	83.9	N	81.8	N
ND	93	Y	91.3	Y	92.0	Y	94.5	Y	94.3	Y
NE	83	N	82.2	N	88.8	N	88.8	N	88.3	N
NH	83	N	80.1	N	79.2	N	79.7	N	75.7	N
NJ	NA	NA	NA	NA	69.7	N	76.5	N	85.3	N
NM	74	N	76.3	N	76.6	N	75.0	N	63.0	N
NV	NA	NA	NA	NA	NA	NA	88.7	N	89.4	N
NY	79	N	81.8	N	85.3	N	81.1	N	77.9	N
OH	71	N	76.2	N	78.9	N	73.7	N	74.2	N
OK	79	N	73.1	N	81.1	N	81.2	N	87.3	N
OR	76	N	74.9	N	74.9	N	74.6	N	75.9	N
PA	69	N	68.0	N	69.0	N	70.6	N	70.5	N
RI	80	N	85.8	N	84.2	N	80.5	N	78.8	N
SC	95	Y	85.3	N	85.3	N	81.4	N	81.0	N
SD	94	Y	94.7	Y	92.4	Y	92.1	Y	91.5	Y
TN	83	N	80.8	N	79.0	N	81.0	N	79.5	N
TX	78	N	75.7	N	75.9	N	74.8	N	75.3	N
UT	87	N	90.1	Y	87.5**	N	89.4	N	85.2	N
VA	74	N	81.0	N	80.1	N	79.5	N	81.4	N
VT	NA	NA	88.2	N	90.0	Y	91.8	Y	87.5	N
WA	73	N	87.1	N	71.0	N	70.8	N	71.1	N
WI	83	N	81.8	N	80.3	N	78.0	N	79.7	N
WV	85	N	82.1	N	84.3	N	83.6	N	85.1	N
MEDIAN	83	N	83.3	N	84.1	N	82.9	N	82.1	N
RANGE	63-99	7 of 40	64.1-97.3	9 of 44	65.2-94.8	9 of 47	42.2-94.8	7 of 49	63.0-96.5	6 of 50

\* Excluding wind-down records

\*\* Query CATI pilot site

**BRFSS EFFICIENCY RATES  
BY STATE, 1989-1993**

State	1989		1990		1991*		1992*		1993*	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AK	NA	NA	NA	NA	29.4	N	27.6	N	17.1	N
AL	67	Y	63.8	Y	20.0*	N	60.8	Y	58.0	Y
AR	NA	NA	NA	NA	40.3	Y	NA	NA	39.7	N
AZ	31	N	32.6	N	32.1	N	35.2	N	30.9	N
CA	36	N	33.8	N	32.6	N	33.5	N	24.5	N
CO	NA	NA	41.1	Y	45.5	Y	42.6	Y	35.1	N
CT	29	N	19.2	N	28.2	N	39.9	N	52.3	Y
DC	31	N	26.0	N	19.9	N	21.8	N	29.1	N
DE	NA	NA	23.8	N	35.8	N	41.0	Y	42.0	Y
FL	36	N	37.0	N	20.0*	N	35.2	N	33.5	N
GA	45	Y	44.3	Y	39.8	N	37.2	N	34.9	N
HI	34	N	31.1	N	27.7	N	28.3	N	25.6	N
IA	43	Y	46.3	Y	45.8	Y	41.9	Y	42.8	Y
ID	40	Y	39.6	N	43.1	Y	48.1	Y	33.4	N
IL	37	N	35.7	N	33.4	N	29.2	N	27.0	N
IN	53	Y	50.1	Y	47.8	Y	44.7	Y	44.6	Y
KS	NA	NA	NA	NA	NA	NA	8.2	N	56.3	Y
KY	40	Y	39.8	N	38.5	N	36.0	N	35.0	N
LA	NA	NA	NA	NA	NA	NA	13.0	N	33.3	N
MA	26	N	20.8	N	17.5	N	25.9	N	34.6	N
MD	35	N	34.6	N	29.0	N	34.2	N	28.7	N
ME	38	N	44.2	Y	41.5	Y	36.7	N	35.7	N
MI	34	N	33.5	N	30.1	N	30.6	N	25.1	N
MN	47	Y	48.1	Y	45.8	Y	44.0	Y	44.9	Y
MO	43	Y	39.1	N	33.6	N	35.4	N	29.0	N
MS	NA	NA	43.1	Y	38.2	N	40.2	Y	41.2	Y
MT	41	Y	39.2	N	39.7	N	39.5	N	36.1	N
NC	32	N	38.8	N	38.2	N	37.3	N	30.3	N
ND	44	Y	43.3	Y	43.9	Y	46.6	Y	47.7	Y
NE	28	N	30.0	N	33.3	N	22.0	N	28.6	N
NH	36	N	43.7	Y	41.8	Y	40.1	Y	28.8	N
NJ	NA	NA	NA	NA	33.6	N	36.8	N	52.0	Y
NM	38	N	36.6	N	40.8	Y	37.1	N	29.3	N
NV	NA	NA	NA	NA	NA	NA	55.8	Y	54.0	Y
NY	29	N	35.2	N	38.3	N	33.4	N	29.9	N
OH	29	N	28.5	N	31.1	N	35.0	N	34.5	N
OK	42	Y	34.6	N	40.6	Y	35.9	N	42.7	Y
OR	38	N	39.5	N	41.0	Y	40.3	Y	35.2	N
PA	28	N	20.8	N	17.7	N	29.5	N	36.3	N
RI	38	N	35.7	N	30.6	N	38.2	N	40.7	Y
SC	40	Y	34.9	N	33.0	N	32.4	N	26.2	N
SD	52	Y	52.2	Y	51.7	Y	50.5	Y	53.1	Y
TN	41	Y	42.1	Y	36.7	N	39.3	N	39.3	N
TX	36	N	34.1	N	29.5	N	32.5	N	28.3	N
UT	33	N	39.1	N	18.5*	N	37.8	N	31.7	N
VA	31	N	39.6	N	39.9	N	39.3	N	39.0	N
VT	NA	NA	37.0	N	38.1	N	39.9	N	44.0	Y
WA	41	Y	40.3	Y	37.4	N	38.1	N	41.0	Y
WI	29	N	28.0	N	28.6	N	26.6	N	27.5	N
WV	43	Y	45.9	Y	45.2	Y	43.6	Y	43.1	Y
MEDIAN	37.5	N	37.9	N	36.7	N	37.3	N	35.1	N
RANGE	26-67	16 of 40	19.2-63.8	14 of 44	17.5-51.7	14 of 47	8.2-60.8	14 of 49	17.1-58.0	17 of 50

\*Query CATI pilot site

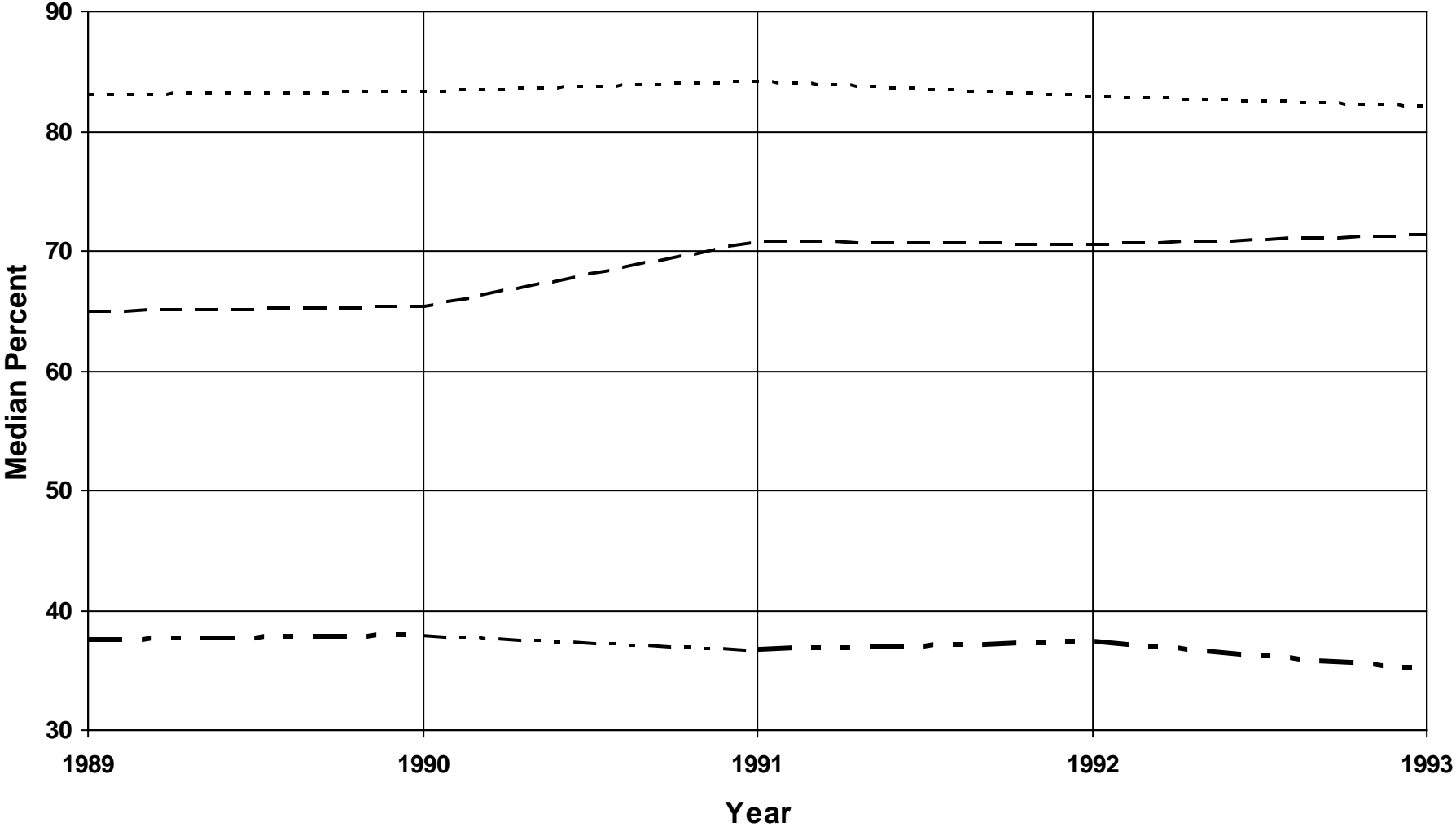


**BREISS WIND-DOWN RATES  
BY STATE, 1990-1993**

State	1990		1991*		1992*		1993*	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AK	NA	NA	5.8	N	6.4	N	5.5	N
AL	0.6	Y	0.0*	Y	0.0	Y	0.3	Y
AR	NA	NA	5.3	N	NA	NA	4.9	Y
AZ	6.4	N	7.6	N	6.1	N	6.4	N
CA	7.3	N	8.9	N	5.9	N	12.2	N
CO	4.3	Y	4.4	Y	4.8	Y	4.8	Y
CT	0.4	Y	6.9	N	0.0	Y	0.0	Y
DC	5.8	N	4.2	Y	2.6	Y	5.7	N
DE	2.7	Y	1.7	Y	1.1	Y	1.2	Y
FL	4.2	Y	0.3*	Y	0.0	Y	3.8	Y
GA	0.1	Y	0.0	Y	0.0	Y	0.4	Y
HI	10.1	N	10.5	N	6.2	N	3.9	Y
IA	5.2	N	4.5	Y	14.6	N	8.9	N
ID	5.5	N	3.1	Y	0.4	Y	3.4	Y
IL	1.8	Y	0.0	Y	0.0	Y	4.8	Y
IN	12.7	N	4.3	Y	4.3	Y	4.4	Y
KS	NA	NA	NA	NA	3.8	Y	4.4	Y
KY	5.4	N	4.9	Y	4.8	Y	5.4	N
LA	NA	NA	NA	NA	6.3	N	5.3	N
MA	0.4	Y	0.0	Y	0.0	Y	0.0	Y
MD	36.5	N	39.3	N	0.9	Y	2.7	Y
ME	5.2	N	5.1	N	5.6	N	5.2	N
MI	4.5	Y	4.2	Y	0.7	Y	0.0	Y
MN	3.8	Y	4.5	Y	2.2	Y	2.9	Y
MO	6.2	N	6.4	N	6.4	N	6.5	N
MS	4.7	Y	5.9	N	4.9	Y	5.2	N
MT	4.9	Y	4.5	Y	4.9	Y	4.5	Y
NC	4.1	Y	2.3	Y	3.1	Y	2.6	Y
ND	7.5	N	6.2	N	4.6	Y	4.3	Y
NE	0.0	Y	0.0	Y	5.4	N	5.4	N
NH	0.0	Y	0.0	Y	0.0	Y	0.0	Y
NJ	NA	NA	0.0	Y	0.0	Y	0.0	Y
NM	13.3	N	12.9	N	8.2	N	8.7	N
NV	NA	NA	NA	NA	0.0	Y	0.0	Y
NY	9.1	N	3.8	Y	3.9	Y	4.2	Y
OH	12.5	N	13.7	N	8.0	N	9.4	N
OK	8.7	N	7.5	N	11.4	N	7.7	N
OR	4.3	Y	0.0	Y	0.5	Y	3.4	Y
PA	0.8	Y	0.0	Y	0.0	Y	0.0	Y
RI	6.0	N	7.1	N	3.2	Y	0.0	Y
SC	12.1	N	9.8	N	5.8	N	17.6	N
SD	5.0	Y	4.9	Y	4.7	Y	4.7	Y
TN	3.5	Y	1.3	Y	3.4	Y	3.3	Y
TX	4.2	Y	4.9	Y	0.0	Y	6.1	N
UT	16.6	N	11.8*	Y	5.2	N	5.6	N
VA	66.4	N	3.2	Y	4.7	Y	3.4	Y
VT	0.0	Y	0.0	Y	0.0	Y	0.0	Y
WA	0.2	Y	0.0	Y	0.7	Y	0.0	Y
WI	0.1	Y	0.0	Y	0.0	Y	0.0	Y
WV	5.7	N	4.6	Y	5.5	N	4.9	Y
WY	NA	NA	NA	NA	NA	NA	NA	NA
MEDIAN	5.0	Y	4.5	Y	3.8	Y	4.4	Y
RANGE	0-66.4	23 of 44	0-39.3	31 of 47	0-14.6	34 of 49	0-17.6	33 of 50

\*Query CATI pilot site

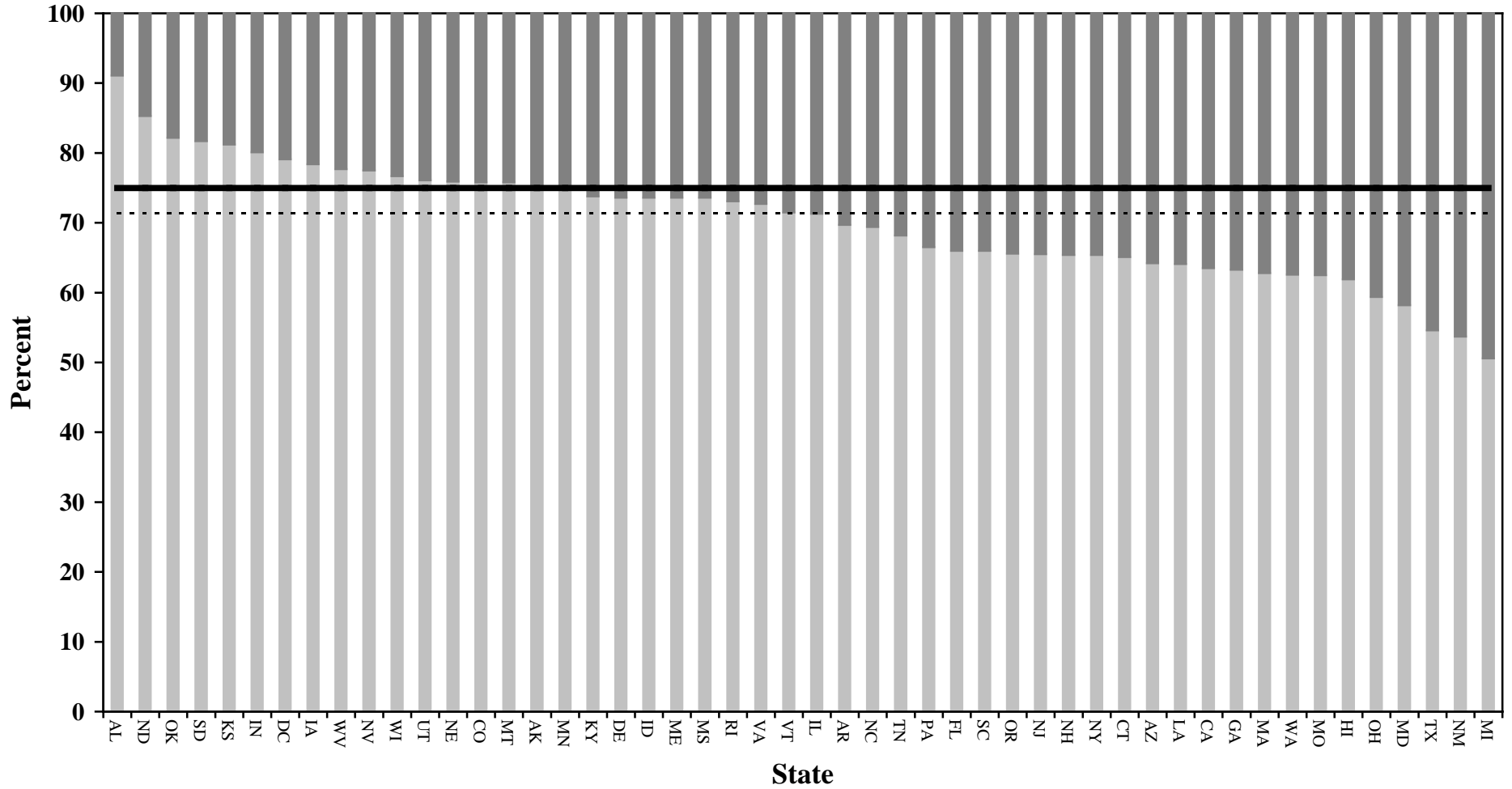
**BRFSS  
 MEDIAN UPPER BOUND, CASRO, AND EFFICIENCY  
 1989-1993**



- . . . - UPPER BOUND   - - - CASRO   - - - EFFICIENCY

Wind-down records included in response rates in 1989 and 1990

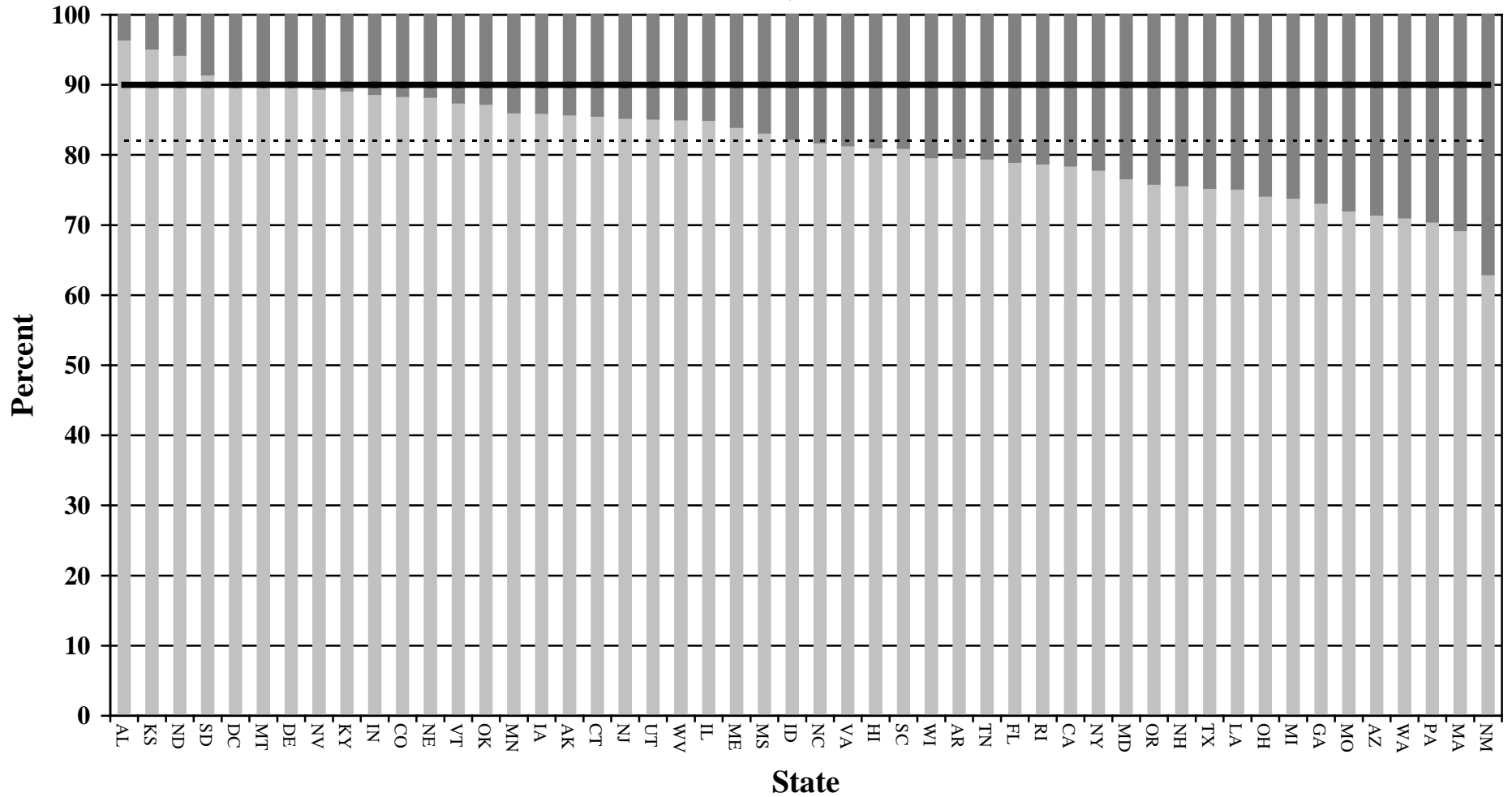
**BRFSS  
CASRO ESTIMATES OF RESPONSE AND REFUSAL RATES  
BY STATE, 1993**



**RESPONSE RATE**
 **REFUSAL RATE**
 **BRFSS MEDIAN RESPONSE RATE**
 **BRFSS OBJECTIVE**

Wind-down records excluded

**BRFSS  
UPPERBOUND ESTIMATES OF RESPONSE AND REFUSAL RATES  
BY STATE, 1993**



**RESPONSE RATE**
 **REFUSAL RATE**
 **BRFSS MEDIAN RESPONSE RATE**
 **BRFSS OBJECTIVE**

Wind-down records excluded

**1993 BRFSS QUALITY CONTROL INDICATORS  
All PARTICIPATING STATES**

INDICATOR	BRFSS OBJECTIVE	OBJECTIVE		BRFSS MEDIAN
		MET	NOT MET	
CASRO RESPONSE RATE	>75		*	71.4
UPPER BOUND	>90		*	82.1
SURVEY EFFICIENCY	>40		*	35.1
% 01s DURING WIND DOWN	<5	*		4.4
% 02s	<10	*		7.3
% 04s	<10	*		9.5
% 07s	<3		*	4.0
% 10s	<0.3	*		0.2