



# **1990 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.

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

Upper Bound: The most liberal of response rate formulas, the upper bound calculation includes only refusals (02s), terminations (09s), and completed interviews 01s. 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 01s 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 During 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, 1990**

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
AL	2161	63.8	56	1.7	677	20.0	105	3.1	257	7.6	15	0.4	39	1.2	5	0.1	5	0.1	2	0.1	66	1.9	3388
AZ	1505	32.6	253	5.5	1215	26.3	420	9.1	624	13.5	62	1.3	342	7.4	39	0.8	31	0.7	17	0.4	113	2.4	4621
CA	2661	33.8	545	6.9	1797	22.8	1057	13.4	989	12.6	47	0.6	418	5.3	144	1.8	35	0.4	58	0.7	126	1.6	7877
CO	1725	41.1	351	8.4	990	23.6	196	4.7	707	16.8	8	0.2	147	3.5	6	0.1	17	0.4	0	0.0	49	1.2	4196
CT	1878	19.2	988	10.1	4159	42.8	560	5.7	1745	17.9	177	1.8	109	1.1	0	0.0	25	0.3	45	0.5	77	0.8	9763
DC	1494	26.0	219	3.8	1852	32.2	772	13.4	1003	17.4	13	0.2	178	3.1	69	1.2	2	0.0	8	0.1	142	2.5	5752
DE	1512	23.8	339	5.3	587	9.2	2483	39.1	570	9.0	138	2.2	541	8.5	23	0.4	29	0.5	18	0.3	118	1.9	6358
FL	2147	37.0	450	7.8	1291	22.3	688	11.9	635	11.0	123	2.1	316	5.5	26	0.4	10	0.2	13	0.2	99	1.7	5798
GA	1801	44.3	234	5.8	1154	28.4	396	9.7	358	8.8	4	0.1	78	1.9	6	0.1	2	0.0	13	0.3	17	0.4	4063
HI	1870	31.1	426	7.1	1738	28.9	558	9.3	636	10.6	117	1.9	438	7.3	133	2.2	23	0.4	26	0.4	55	0.9	6020
IA	1508	46.3	145	4.5	881	27.0	120	3.7	186	5.7	4	0.1	344	10.6	6	0.2	18	0.6	14	0.4	30	0.9	3256
ID	1794	39.6	173	3.6	983	21.7	827	18.2	390	6.6	33	0.7	203	4.5	11	0.2	10	0.2	41	0.9	68	0.5	4533
IL	1800	35.7	302	6.0	1558	30.9	278	5.5	607	12.0	47	0.9	257	5.1	107	2.1	8	0.2	6	0.1	72	1.4	5042
IN	2417	50.1	199	4.1	1287	26.7	239	5.0	409	8.5	16	0.3	187	3.9	8	0.2	3	0.1	4	0.1	59	1.2	4828
KS	820	7.2	215	1.9	8890	77.8	152	1.3	1152	10.1	9	0.1	38	0.3	6	0.1	11	0.1	86	0.8	41	0.4	11420
KY	1800	39.8	225	5.0	1098	24.3	562	12.4	381	9.4	12	0.3	284	5.3	4	0.1	9	0.2	23	0.5	118	2.6	4516
MA	1296	20.8	708	11.4	2486	39.9	465	7.5	978	15.7	93	1.5	90	1.4	0	0.0	18	0.3	32	0.5	70	1.1	6236
MD	1687	34.6	294	6.0	987	20.2	1014	20.8	554	11.4	19	0.4	209	4.3	28	0.8	7	0.1	45	0.9	36	0.7	4880
ME	1258	44.2	185	6.5	745	26.2	311	10.9	201	7.1	37	1.3	73	2.6	0	0.0	4	0.1	6	0.2	24	0.8	2844
MI	2400	33.5	201	2.8	1343	18.8	1296	18.1	677	9.5	15	0.2	977	13.7	54	0.8	17	0.2	57	0.8	118	1.6	7155
MN	3420	48.1	393	5.5	1703	23.9	517	7.3	636	8.9	35	0.5	298	4.2	9	0.1	40	0.6	14	0.2	48	0.7	7113
MO	1473	39.1	384	10.2	850	22.6	550	14.6	329	8.7	22	0.6	86	2.3	4	0.1	9	0.2	17	0.5	43	1.1	3767
MS	1584	43.1	343	9.3	862	23.5	232	6.3	281	7.7	6	0.2	231	6.3	0	0.0	5	0.1	26	0.7	101	2.8	3671
MT	1188	39.2	115	3.8	895	29.5	270	8.9	306	10.1	11	0.4	177	5.8	3	0.1	4	0.1	1	0.0	64	2.1	3034
NC	2135	38.8	384	7.0	1558	28.3	627	9.6	542	9.8	6	0.1	277	5.0	10	0.2	1	0.0	21	0.4	48	0.9	5609
ND	1620	43.3	152	4.1	1060	28.3	381	10.2	262	7.0	9	0.2	188	5.0	0	0.0	3	0.1	17	0.5	50	1.3	3742
NE	1612	30.0	332	6.2	2136	39.7	421	7.8	432	8.0	11	0.2	342	6.4	13	0.2	18	0.3	10	0.2	52	1.0	5379
NH	1500	43.7	352	10.2	691	20.1	348	10.1	340	9.9	67	2.0	66	1.9	5	0.1	20	0.6	6	0.2	40	1.2	3435
NM	1189	36.6	370	11.4	696	21.4	379	11.7	322	9.9	16	0.5	142	4.4	47	1.4	0	0.0	26	0.8	58	1.8	3245
NY	1509	35.2	328	7.7	901	21.0	749	17.5	411	9.8	4	0.1	240	5.6	75	1.7	8	0.2	21	0.5	40	0.9	4286
OH	1319	28.5	397	8.6	1482	32.1	735	15.9	395	8.5	4	0.1	165	3.6	11	0.2	14	0.3	57	1.2	42	0.9	4621
OK	1514	34.6	556	12.7	1201	27.5	414	9.5	376	8.6	16	0.4	209	4.8	14	0.3	1	0.0	26	0.8	45	1.0	4372
OR	3308	39.5	1063	12.7	1627	19.4	533	7.6	1060	12.6	29	0.3	433	5.2	60	0.7	44	0.5	10	0.1	116	1.4	8283
PA	2479	20.8	1125	9.4	5761	48.3	525	4.4	1527	12.8	169	1.4	160	1.3	0	0.0	40	0.3	44	0.4	88	0.7	11918
RI	1805	35.7	293	5.8	1090	21.6	702	13.9	606	12.0	47	0.9	274	5.4	82	1.6	5	0.1	31	0.8	114	2.3	5049
SC	2239	34.9	379	5.9	1820	28.4	750	11.7	680	10.6	35	0.5	410	6.4	10	0.2	8	0.1	42	0.7	36	0.8	6409
SD	1808	52.2	101	2.9	874	25.2	251	7.2	260	7.5	4	0.1	124	3.6	1	0.0	1	0.0	2	0.1	38	1.1	3464
TN	2699	42.1	626	9.8	1351	21.1	902	14.1	505	7.8	15	0.2	194	3.0	6	0.1	14	0.2	59	0.9	36	0.8	6407
TX	1500	34.1	479	10.9	1176	26.8	519	11.8	447	10.2	29	0.7	169	3.8	16	0.4	2	0.0	0	0.0	58	1.3	4395
UT	1793	39.1	198	4.3	1240	27.1	553	12.1	357	7.8	9	0.2	326	7.1	25	0.5	0	0.0	44	1.0	36	0.8	4581
VA	1772	39.5	415	9.3	1150	25.7	280	6.3	538	12.0	3	0.1	217	4.9	33	0.7	0	0.0	40	0.9	26	0.6	4474
VT	1123	37.0	126	4.2	718	23.7	545	18.0	290	9.6	47	1.5	106	3.5	4	0.1	24	0.8	37	1.2	14	0.5	3034
WA	2100	40.3	742	14.2	1030	19.8	403	7.7	468	9.0	25	0.5	301	5.8	33	0.6	27	0.5	4	0.1	82	1.6	5215
WI	1260	28.0	269	6.0	2218	49.3	121	2.7	499	11.1	39	0.9	24	0.5	0	0.0	11	0.2	15	0.3	41	0.9	4497
WV	2372	45.9	518	10.0	1104	21.4	371	7.2	385	7.5	9	0.2	290	5.6	5	0.1	0	0.0	27	0.5	85	1.6	5166
CUM	81855	34.4	16948	7.1	70912	29.8	24577	10.3	25313	10.6	1656	0.7	10717	4.5	1141	0.5	583	0.2	1111	0.5	2899	1.2	237712
MED	1772	37.0	339	6.2	1176	25.7	517	9.6	468	9.8	16	0.4	209	4.8	10	0.2	9	0.2	21	0.4	55	1.1	

**BRFSS CASRO RESPONSE RATE ESTIMATES  
BY STATE, 1986-1990**

State	1986		1987		1988		1989		1990	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AL	79	Y	82	Y	96	Y	98	Y	92.6	Y
AZ	53	N	56	N	65	N	60	N	63.9	N
CA	54	N	43	N	57	N	64	N	62.4	N
CO	NA	NA	NA	NA	NA	NA	NA	NA	73.4	N
CT	NA	NA	NA	NA	56	N	51	N	58.7	N
DC	65	N	64	N	72	N	74	N	68.2	N
DE	NA	NA	NA	NA	NA	NA	NA	NA	37.9	N
FL	51	N	53	N	66	N	64	N	64.6	N
GA	55	N	57	N	60	N	73	N	76.8	Y
HI	68	N	68	N	67	N	63	N	61.2	N
IA	NA	NA	NA	NA	77	Y	70	N	71.7	N
ID	56	N	56	N	63	N	66	N	66.5	N
IL	55	N	53	N	61	N	64	N	71.8	N
IN	78	Y	79	Y	81	Y	78	Y	81.8	Y
KY	78	Y	74	N	69	N	68	N	67.6	N
MA	50	N	57	N	65	N	47	N	56.5	N
MD	NA	NA	46	N	49	N	62	N	60.1	N
ME	NA	NA	61	N	57	N	66	N	73.5	N
MI	NA	NA	NA	NA	NA	NA	55	N	54.1	N
MN	64	N	73	N	70	N	72	N	76.2	Y
MO	60	N	65	N	67	N	67	N	64.1	N
MS	NA	NA	NA	NA	NA	NA	NA	NA	68.1	N
MT	79	Y	71	N	69	N	72	N	72.9	N
NC	70	N	60	N	66	N	64	N	68.7	N
ND	79	Y	81	Y	84	Y	83	Y	73.7	N
NE	NA	NA	70	N	70	N	64	N	64.4	N
NH	NA	NA	62	N	62	N	65	N	69.4	N
NM	73	N	71	N	71	N	60	N	61.2	N
NY	59	N	62	N	58	N	50	N	59.4	N
OH	57	N	64	N	56	N	54	N	57.7	N
OK	NA	NA	NA	NA	61	N	66	N	59.7	N
OR	NA	NA	NA	NA	NA	NA	61	N	63.0	N
PA	NA	NA	NA	NA	NA	NA	54	N	62.1	N
RI	38	N	73	N	66	N	65	N	64.9	N
SC	73	N	85	Y	81	Y	87	Y	64.6	N
SD	NA	NA	76	Y	83	Y	84	Y	82.4	Y
TN	60	N	59	N	58	N	68	N	64.9	N
TX	NA	NA	58	N	57	N	66	N	64.5	N
UT	55	N	60	N	57	N	61	N	67.3	N
VA	NA	NA	NA	NA	NA	NA	53	N	68.4	N
VT	NA	NA	NA	NA	NA	NA	NA	NA	65.8	N
WA	NA	NA	68	N	69	N	65	N	61.1	N
WI	79	Y	80	Y	78	Y	79	Y	78.1	Y
WV	75	Y	70	N	72	N	69	N	68.8	N
MEDIAN	62	N	64	N	66	N	65	N	65.4	N
RANGE	38-79	7 of 26	43-85	6 of 33	49-96	7 of 36	47-98	6 of 40	37.9-92.6	8 of 44

\*Excluding wind-down records except MI

\*\* Query CATI pilot site

**BRFSS UPPER BOUND RESPONSE RATE ESTIMATES  
BY STATE, 1986-1990**

State	1986		1987		1988		1989		1990	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AL	92	Y	94	Y	98	Y	99	Y	97.3	Y
AZ	75	N	83	N	86	N	84	N	84.1	N
CA	85	N	77	N	80	N	83	N	82.1	N
CO	NA	NA	NA	NA	NA	NA	NA	NA	82.4	N
CT	NA	NA	NA	NA	73	N	63	N	64.9	N
DC	84	N	79	N	91	Y	92	Y	87.1	N
DE	NA	NA	NA	NA	NA	NA	NA	NA	80.4	N
FL	71	N	74	N	84	N	83	N	82.4	N
GA	81	N	81	N	82	N	88	N	88.4	N
HI	89	N	84	N	83	N	79	N	80.6	N
IA	NA	NA	NA	NA	90	Y	88	N	90.2	Y
ID	72	N	82	N	79	N	79	N	90.7	Y
IL	70	N	74	N	81	N	83	N	85.3	N
IN	91	Y	90	Y	92	Y	94	Y	92.3	Y
KY	94	Y	94	Y	94	Y	91	Y	88.5	N
MA	70	N	74	N	83	N	64	N	64.1	N
MD	NA	NA	68	N	70	N	79	N	84.9	N
ME	NA	NA	78	N	81	N	84	N	86.9	N
MI	NA	NA	NA	NA	NA	NA	81	N	91.7	Y
MN	75	N	87	N	87	N	86	N	88.8	N
MO	80	N	80	N	83	N	82	N	78.9	N
MS	NA	NA	NA	NA	NA	NA	NA	NA	82.0	N
MT	86	N	85	N	87	N	89	N	90.9	Y
NC	91	Y	89	N	86	N	84	N	84.7	N
ND	90	Y	90	Y	93	Y	93	Y	91.3	Y
NE	NA	NA	87	N	87	N	83	N	82.2	N
NH	NA	NA	78	N	81	N	83	N	80.1	N
NM	89	N	81	N	84	N	74	N	76.3	N
NY	85	N	87	N	81	N	79	N	81.8	N
OH	76	N	81	N	74	N	71	N	76.2	N
OK	NA	NA	NA	NA	78	N	79	N	73.1	N
OR	NA	NA	NA	NA	NA	NA	76	N	74.9	N
PA	NA	NA	NA	NA	NA	NA	69	N	68.0	N
RI	74	N	83	N	77	N	80	N	85.8	N
SC	88	N	95	Y	92	Y	95	Y	85.3	N
SD	NA	NA	91	Y	95	Y	94	Y	94.7	Y
TN	74	N	72	N	70	N	83	N	80.8	N
TX	NA	NA	73	N	72	N	78	N	75.7	N
UT	88	N	84	N	85	N	87	N	90.1	Y
VA	NA	NA	NA	NA	NA	NA	74	N	81.0	N
VT	NA	NA	NA	NA	NA	NA	NA	NA	88.2	N
WA	NA	NA	87	N	81	N	73	N	87.1	N
WI	86	N	86	N	83	N	83	N	81.8	N
WV	90	Y	84	N	86	N	85	N	82.1	N
MEDIAN	85	N	83	N	83	N	83	N	83.3	N
RANGE	70-94	6 of 26	68-95	6 of 33	70-98	8 of 36	63-99	7 of 40	64.1-97.3	9 of 44

\*Excluding wind-down records except MI

\*\*Query CATI pilot site

**BRFSS EFFICIENCY RATES  
BY STATE, 1986-1990**

State	1986		1987		1988		1989		1990	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AL	52	Y	55	Y	68	Y	67	Y	63.8	Y
AZ	32	N	32	N	37	N	31	N	32.6	N
CA	31	N	25	N	35	N	36	N	33.8	N
CO	NA	NA	NA	NA	NA	NA	NA	NA	41.1	Y
CT	NA	NA	NA	NA	33	N	29	N	19.2	N
DC	34	N	37	N	39	N	31	N	26.0	N
DE	NA	NA	NA	NA	NA	NA	NA	NA	23.8	N
FL	29	N	28	N	39	N	36	N	37.0	N
GA	39	N	36	N	32	N	45	Y	44.3	Y
HI	44	Y	41	Y	40	Y	34	N	31.1	N
IA	NA	NA	NA	NA	47	Y	43	Y	46.3	Y
ID	31	N	32	N	35	N	40	Y	39.6	N
IL	35	N	33	N	35	N	37	N	35.7	N
IN	52	Y	52	Y	49	Y	53	Y	50.1	Y
KY	44	Y	44	Y	41	Y	40	Y	39.8	N
MA	34	N	39	N	43	Y	26	N	20.8	N
MD	NA	NA	23	N	27	N	35	N	34.6	N
ME	NA	NA	40	Y	37	N	38	N	44.2	Y
MI	NA	NA	NA	NA	NA	NA	34	N	33.5	N
MN	42	Y	48	Y	46	Y	47	Y	48.1	Y
MO	38	N	42	Y	45	Y	43	Y	39.1	N
MS	NA	NA	NA	NA	NA	NA	NA	NA	43.1	Y
MT	42	Y	41	Y	36	N	41	Y	39.2	N
NC	39	N	35	N	38	N	32	N	38.8	N
ND	44	Y	46	Y	44	Y	44	Y	43.3	Y
NE	NA	NA	30	N	30	N	28	N	30.0	N
NH	NA	NA	38	N	30	N	36	N	43.7	Y
NM	45	Y	43	Y	43	Y	38	N	36.6	N
NY	38	N	40	Y	33	N	29	N	35.2	N
OH	30	N	37	N	29	N	29	N	28.5	N
OK	NA	NA	NA	NA	34	N	42	Y	34.6	N
OR	NA	NA	NA	NA	NA	NA	38	N	39.5	N
PA	NA	NA	NA	NA	NA	NA	28	N	20.8	N
RI	26	N	47	Y	41	Y	38	N	35.7	N
SC	47	Y	48	Y	46	Y	40	Y	34.9	N
SD	NA	NA	39	N	49	Y	52	Y	52.2	Y
TN	39	N	38	N	39	N	41	Y	42.1	Y
TX	NA	NA	30	N	29	N	36	N	34.1	N
UT	31	N	35	N	33	N	33	N	39.1	N
VA	NA	NA	NA	NA	NA	NA	31	N	39.6	N
VT	NA	NA	NA	NA	NA	NA	NA	NA	37.0	N
WA	NA	NA	41	Y	45	Y	41	Y	40.3	Y
WI	28	N	30	N	29	N	29	N	28.0	N
WV	48	Y	46	Y	41	Y	43	Y	45.9	Y
MEDIAN	38.5	N	39	N	38.5	N	37.5	N	37.9	N
RANGE	26-52	10 of 26	23-55	15 of 33	27-68	15 of 36	26-67	16 of 40	19.2-63.8	14 of 44

\*Query CATI pilot site

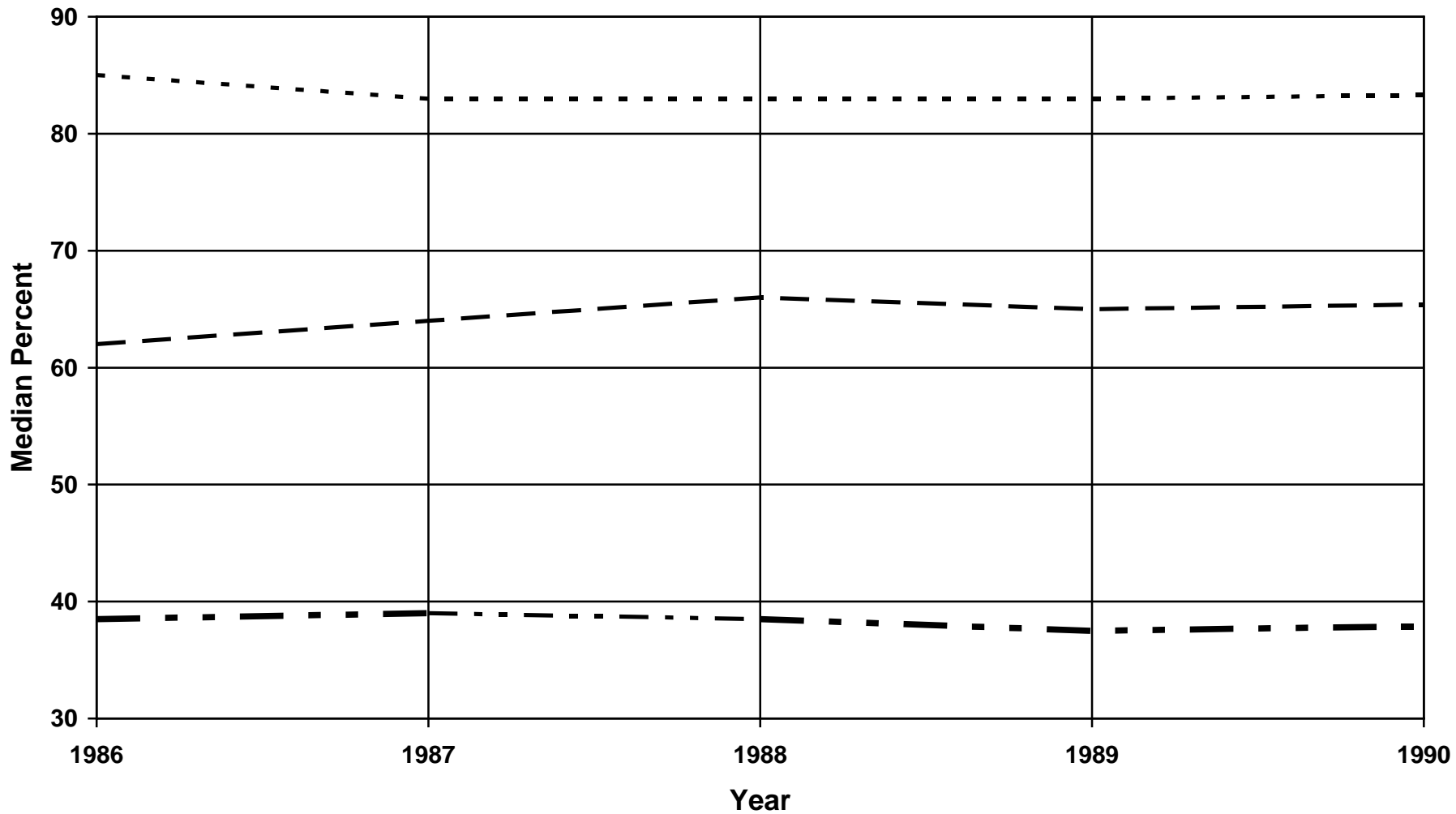


**BRESS WIND-DOWN RATES  
BY STATE, 1990**

State	1990	
	Rate	ObjMet
AL	0.6	Y
AZ	6.4	N
CA	7.3	N
CO	4.3	Y
CT	0.4	Y
DC	5.8	N
DE	2.7	Y
FL	4.2	Y
GA	0.1	Y
HI	10.1	N
IA	5.2	N
ID	5.5	N
IL	1.8	Y
IN	12.7	N
KY	5.4	N
MA	0.4	Y
MD	36.5	N
ME	5.2	N
MI	4.5	Y
MN	3.8	Y
MO	6.2	N
MS	4.7	Y
MT	4.9	Y
NC	4.1	Y
ND	7.5	N
NE	0.0	Y
NH	0.0	Y
NM	13.3	N
NY	9.1	N
OH	12.5	N
OK	8.7	N
OR	4.3	Y
PA	0.8	Y
RI	6.0	N
SC	12.1	N
SD	5.0	Y
TN	3.5	Y
TX	4.2	Y
UT	16.6	N
VA	66.4	N
VT	0.0	Y
WA	0.2	Y
WI	0.1	Y
WV	5.7	N
MEDIAN	5.0	Y
RANGE	0-66.4	23 of 44

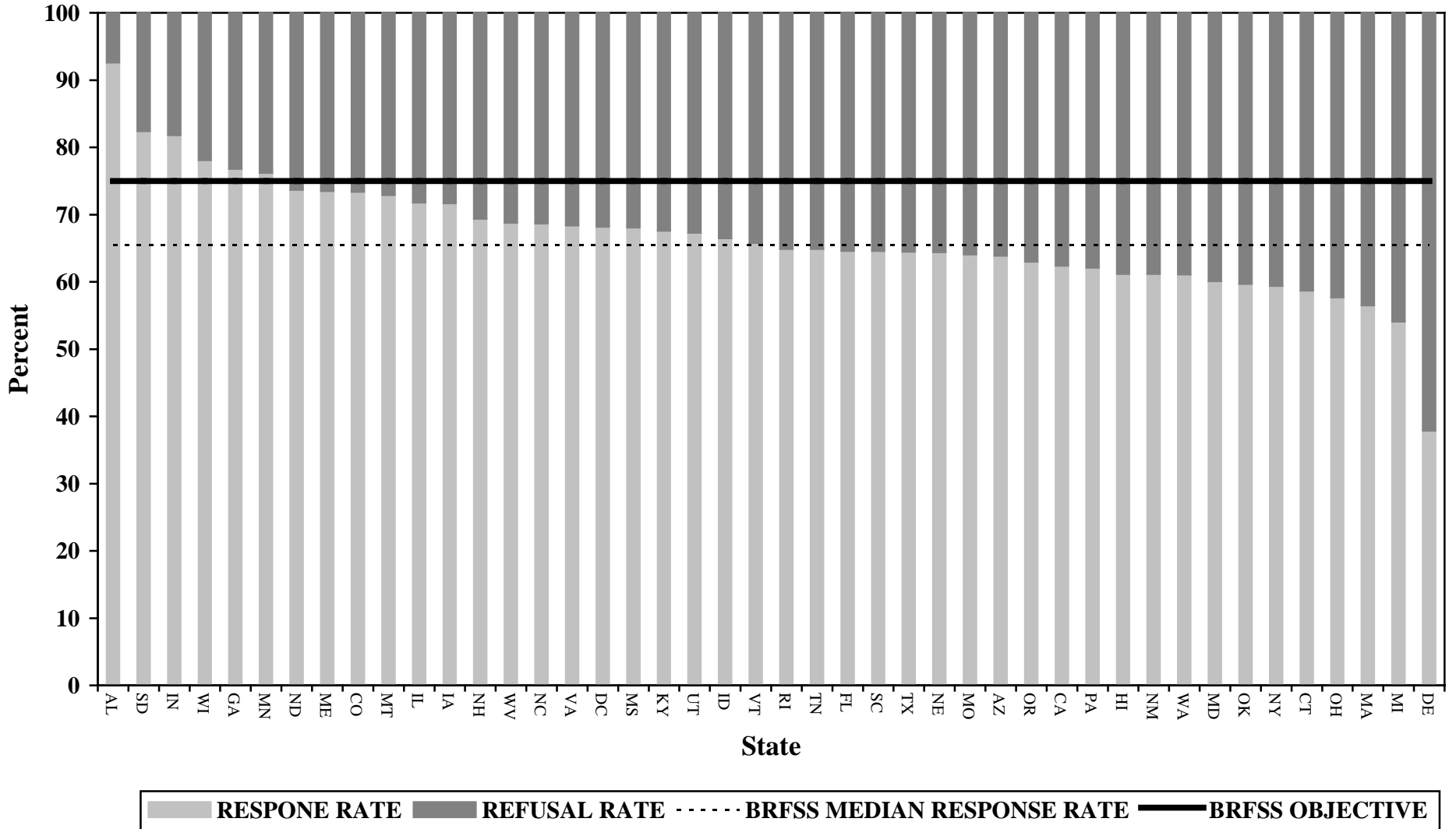
\*Query CATI pilot site

**BRFSS  
MEDIAN UPPER BOUND, CASRO, AND EFFICIENCY  
1986-1990**

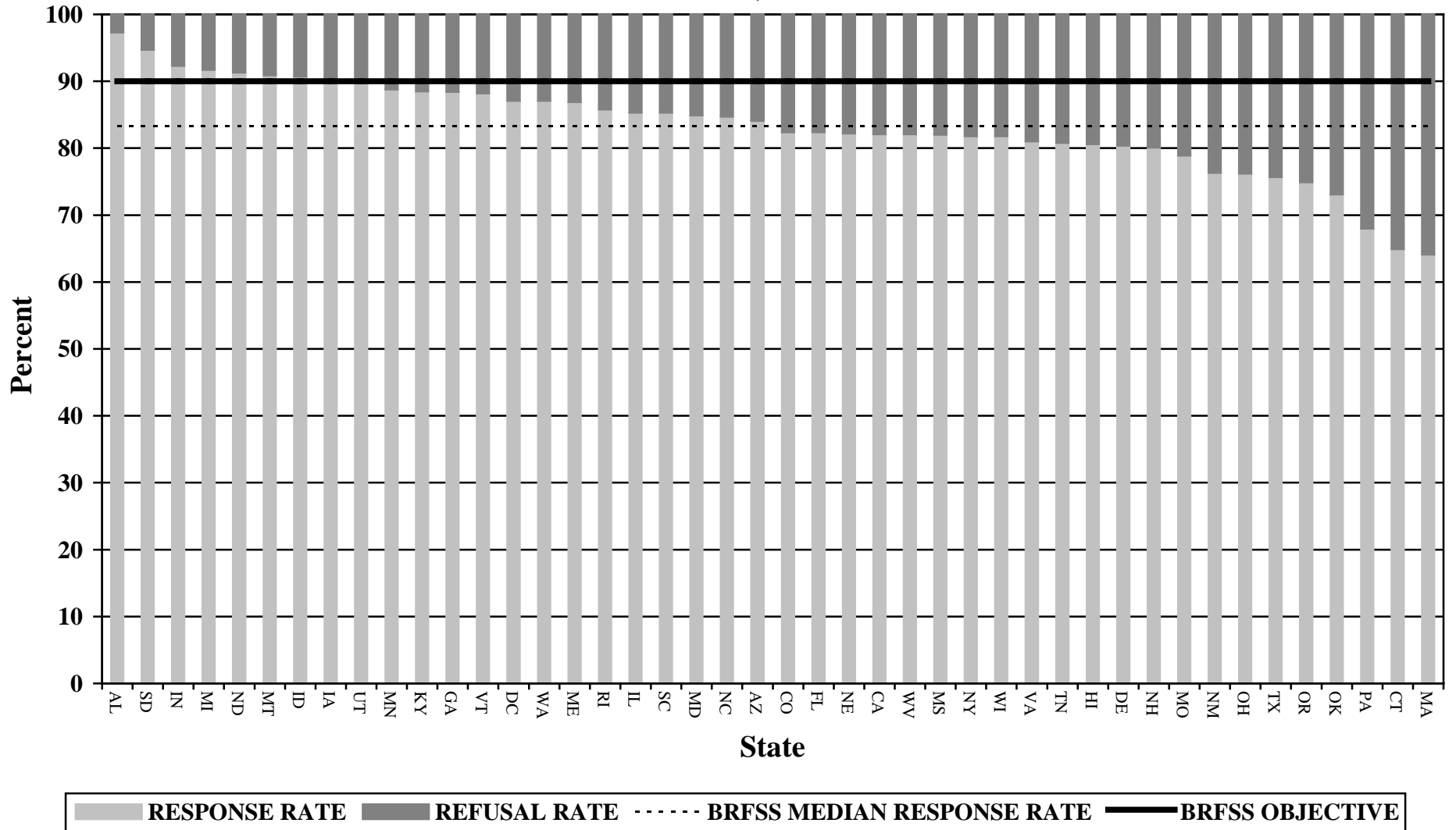


**- - - UPPER BOUND - - CASRO — EFFICIENCY**

**BRFSS  
CASRO ESTIMATES OF RESPONSE AND REFUSAL RATES  
BY STATE, 1990**



**BRFSS**  
**UPPERBOUND ESTIMATES OF RESPONSE AND REFUSAL RATES**  
**BY STATE, 1990**



**1990 BRFSS QUALITY CONTROL INDICATORS  
All PARTICIPATING STATES**

INDICATOR	BRFSS OBJECTIVE	OBJECTIVE		BRFSS MEDIAN
		MET	NOT MET	
CASRO RESPONSE RATE	>75		*	66.3
UPPER BOUND	>90		*	82.4
SURVEY EFFICIENCY	>40		*	37.0
% 01s DURING WIND DOWN	<5	*		4.9
% 02s	<10	*		6.2
% 04s	<10	*		9.6
% 07s	<3		*	4.8
% 10s	<0.3		*	0.4