



# **1991 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.

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

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.

## **BRFSS 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 EFFICIENCY RATES  
BY STATE, 1987-1991**

State	1987		1988		1989		1990		1991*	
	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet	Rate	ObjMet
AK	NA	NA	NA	NA	NA	NA	NA	NA	29.4	N
AL	55	Y	68	Y	67	Y	63.8	Y	20.0*	N
AR	NA	NA	NA	NA	NA	NA	NA	NA	40.3	Y
AZ	32	N	37	N	31	N	32.6	N	32.1	N
CA	25	N	35	N	36	N	33.8	N	32.6	N
CO	NA	NA	NA	NA	NA	NA	41.1	Y	45.5	Y
CT	NA	NA	33	N	29	N	19.2	N	28.2	N
DC	37	N	39	N	31	N	26.0	N	19.9	N
DE	NA	NA	NA	NA	NA	NA	23.8	N	35.8	N
FL	28	N	39	N	36	N	37.0	N	20.0*	N
GA	36	N	32	N	45	Y	44.3	Y	39.8	N
HI	41	Y	40	Y	34	N	31.1	N	27.7	N
IA	NA	NA	47	Y	43	Y	46.3	Y	45.8	Y
ID	32	N	35	N	40	Y	39.6	N	43.1	Y
IL	33	N	35	N	37	N	35.7	N	33.4	N
IN	52	Y	49	Y	53	Y	50.1	Y	47.8	Y
KY	44	Y	41	Y	40	Y	39.8	N	38.5	N
MA	39	N	43	Y	26	N	20.8	N	17.5	N
MD	23	N	27	N	35	N	34.6	N	29.0	N
ME	40	Y	37	N	38	N	44.2	Y	41.5	Y
MI	NA	NA	NA	NA	34	N	33.5	N	30.1	N
MN	48	Y	46	Y	47	Y	48.1	Y	45.8	Y
MO	42	Y	45	Y	43	Y	39.1	N	33.6	N
MS	NA	NA	NA	NA	NA	NA	43.1	Y	38.2	N
MT	41	Y	36	N	41	Y	39.2	N	39.7	N
NC	35	N	38	N	32	N	38.8	N	38.2	N
ND	46	Y	44	Y	44	Y	43.3	Y	43.9	Y
NE	30	N	30	N	28	N	30.0	N	33.3	N
NH	38	N	30	N	36	N	43.7	Y	41.8	Y
NJ	NA	NA	NA	NA	NA	NA	NA	NA	33.6	N
NM	43	Y	43	Y	38	N	36.6	N	40.8	Y
NY	40	Y	33	N	29	N	35.2	N	38.3	N
OH	37	N	29	N	29	N	28.5	N	31.1	N
OK	NA	NA	34	N	42	Y	34.6	N	40.6	Y
OR	NA	NA	NA	NA	38	N	39.5	N	41.0	Y
PA	NA	NA	NA	NA	28	N	20.8	N	17.7	N
RI	47	Y	41	Y	38	N	35.7	N	30.6	N
SC	48	Y	46	Y	40	Y	34.9	N	33.0	N
SD	39	N	49	Y	52	Y	52.2	Y	51.7	Y
TN	38	N	39	N	41	Y	42.1	Y	36.7	N
TX	30	N	29	N	36	N	34.1	N	29.5	N
UT	35	N	33	N	33	N	39.1	N	18.5*	N
VA	NA	NA	NA	NA	31	N	39.6	N	39.9	N
VT	NA	NA	NA	NA	NA	NA	37.0	N	38.1	N
WA	41	Y	45	Y	41	Y	40.3	Y	37.4	N
WI	30	N	29	N	29	N	28.0	N	28.6	N
WV	46	Y	41	Y	43	Y	45.9	Y	45.2	Y
MEDIAN	39	N	38.5	N	37.5	N	37.9	N	38.1	N
RANGE	23-55	15 of 33	27-68	15 of 36	26-67	16 of 40	19.2-63.8	14 of 44	17.5-51.7	14 of 47

\*Query CATI pilot site

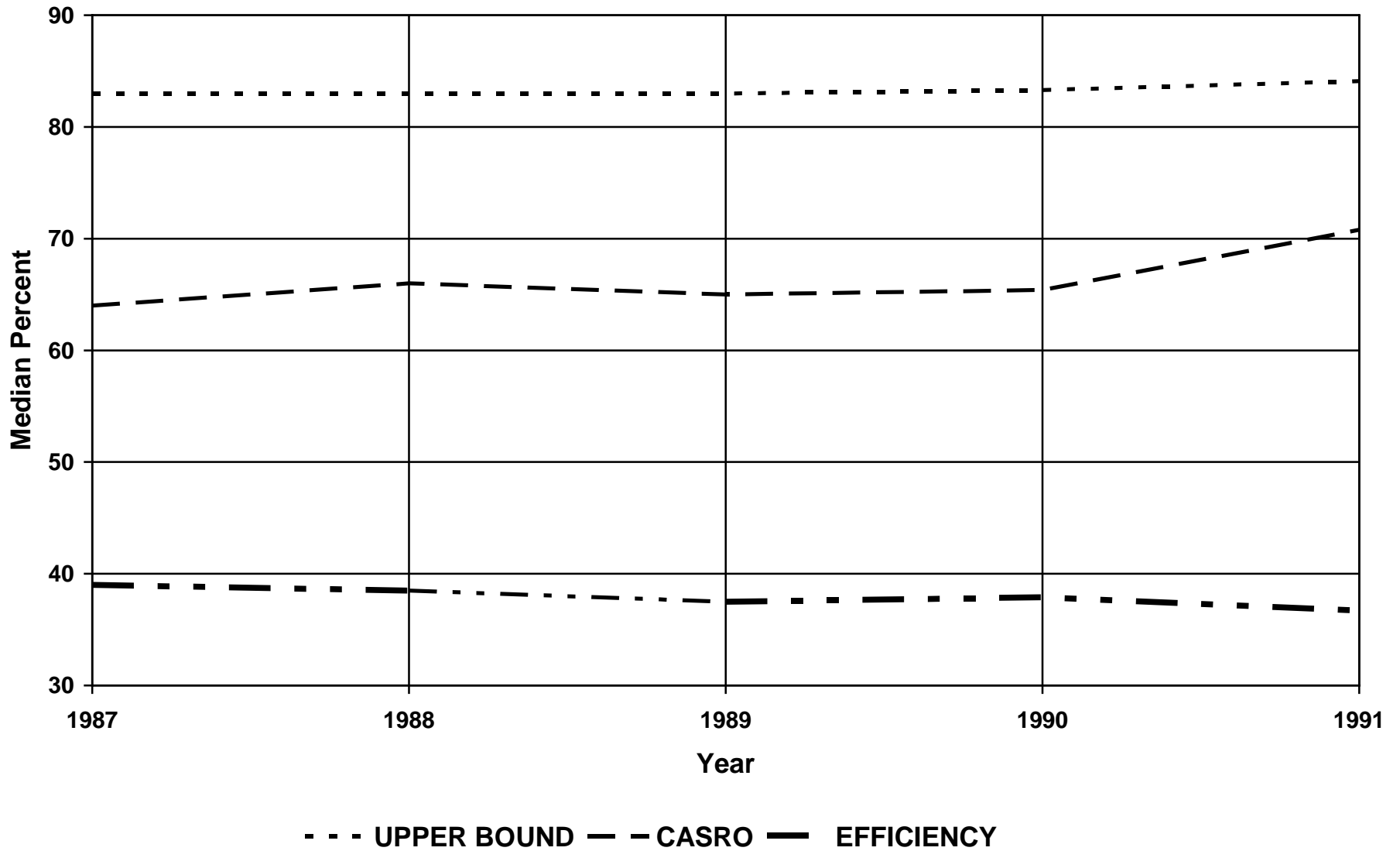


**BRFSS WIND-DOWN RATES  
BY STATE, 1990-1991**

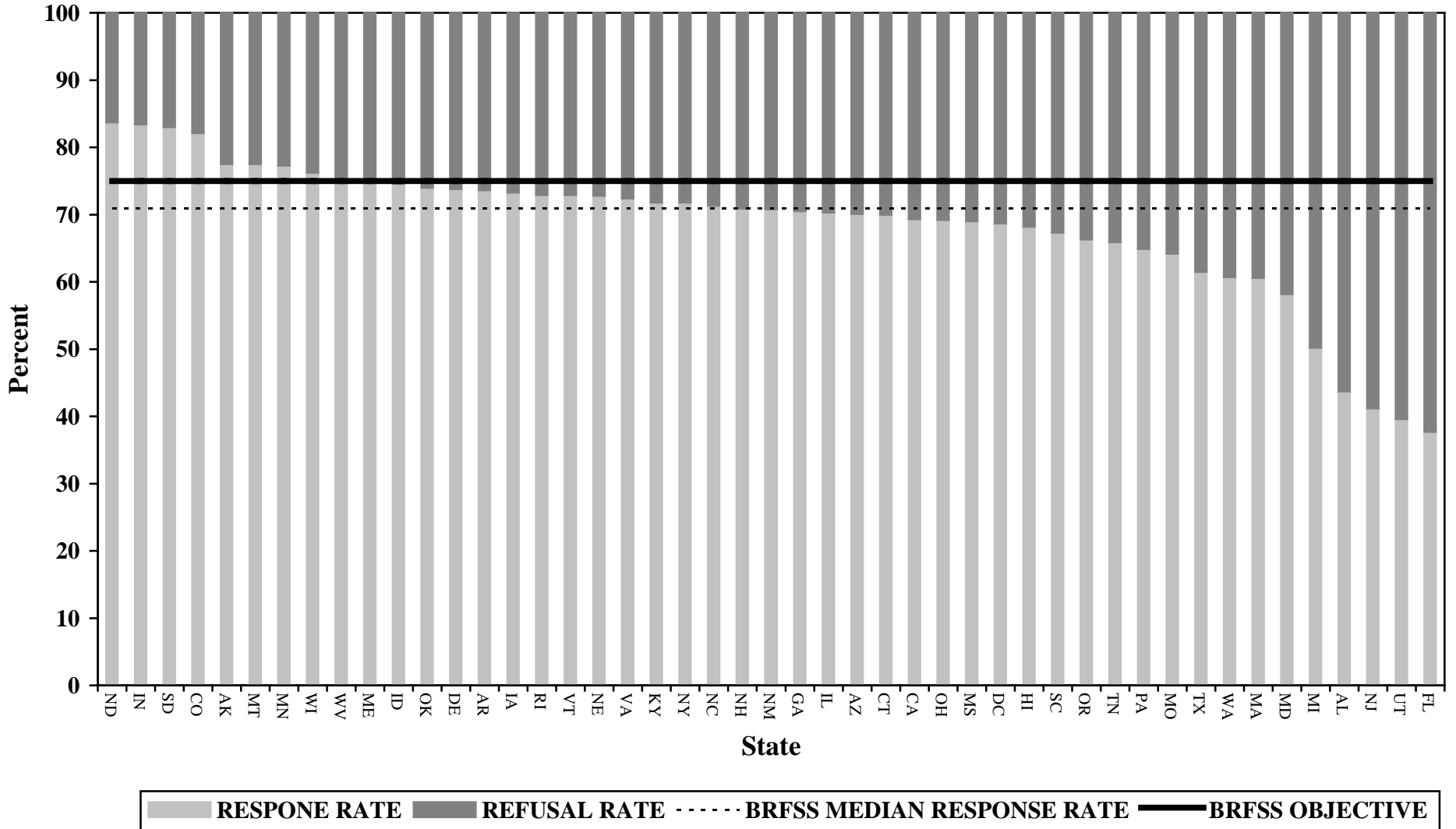
State	1990		1991*	
	Rate	ObjMet	Rate	ObjMet
AK	NA	NA	5.8	N
AL	0.6	Y	0.0*	Y
AR	NA	NA	5.3	N
AZ	6.4	N	7.6	N
CA	7.3	N	8.9	N
CO	4.3	Y	4.4	Y
CT	0.4	Y	6.9	N
DC	5.8	N	4.2	Y
DE	2.7	Y	1.7	Y
FL	4.2	Y	0.3*	Y
GA	0.1	Y	0.0	Y
HI	10.1	N	10.5	N
IA	5.2	N	4.5	Y
ID	5.5	N	3.1	Y
IL	1.8	Y	0.0	Y
IN	12.7	N	4.3	Y
KY	5.4	N	4.9	Y
MA	0.4	Y	0.0	Y
MD	36.5	N	39.3	N
ME	5.2	N	5.1	N
MI	4.5	Y	4.2	Y
MN	3.8	Y	4.5	Y
MO	6.2	N	6.4	N
MS	4.7	Y	5.9	N
MT	4.9	Y	4.5	Y
NC	4.1	Y	2.3	Y
ND	7.5	N	6.2	N
NE	0.0	Y	0.0	Y
NH	0.0	Y	0.0	Y
NJ	NA	NA	0.0	Y
NM	13.3	N	12.9	N
NY	9.1	N	3.8	Y
OH	12.5	N	13.7	N
OK	8.7	N	7.5	N
OR	4.3	Y	0.0	Y
PA	0.8	Y	0.0	Y
RI	6.0	N	7.1	N
SC	12.1	N	9.8	N
SD	5.0	Y	4.9	Y
TN	3.5	Y	1.3	Y
TX	4.2	Y	4.9	Y
UT	16.6	N	11.8*	Y
VA	66.4	N	3.2	Y
VT	0.0	Y	0.0	Y
WA	0.2	Y	0.0	Y
WI	0.1	Y	0.0	Y
WV	5.7	N	4.6	Y
MEDIAN	5.0	Y	4.5	Y
RANGE	0-66.4	23 of 44	0-39.3	31 of 47

\*Query CATI pilot site

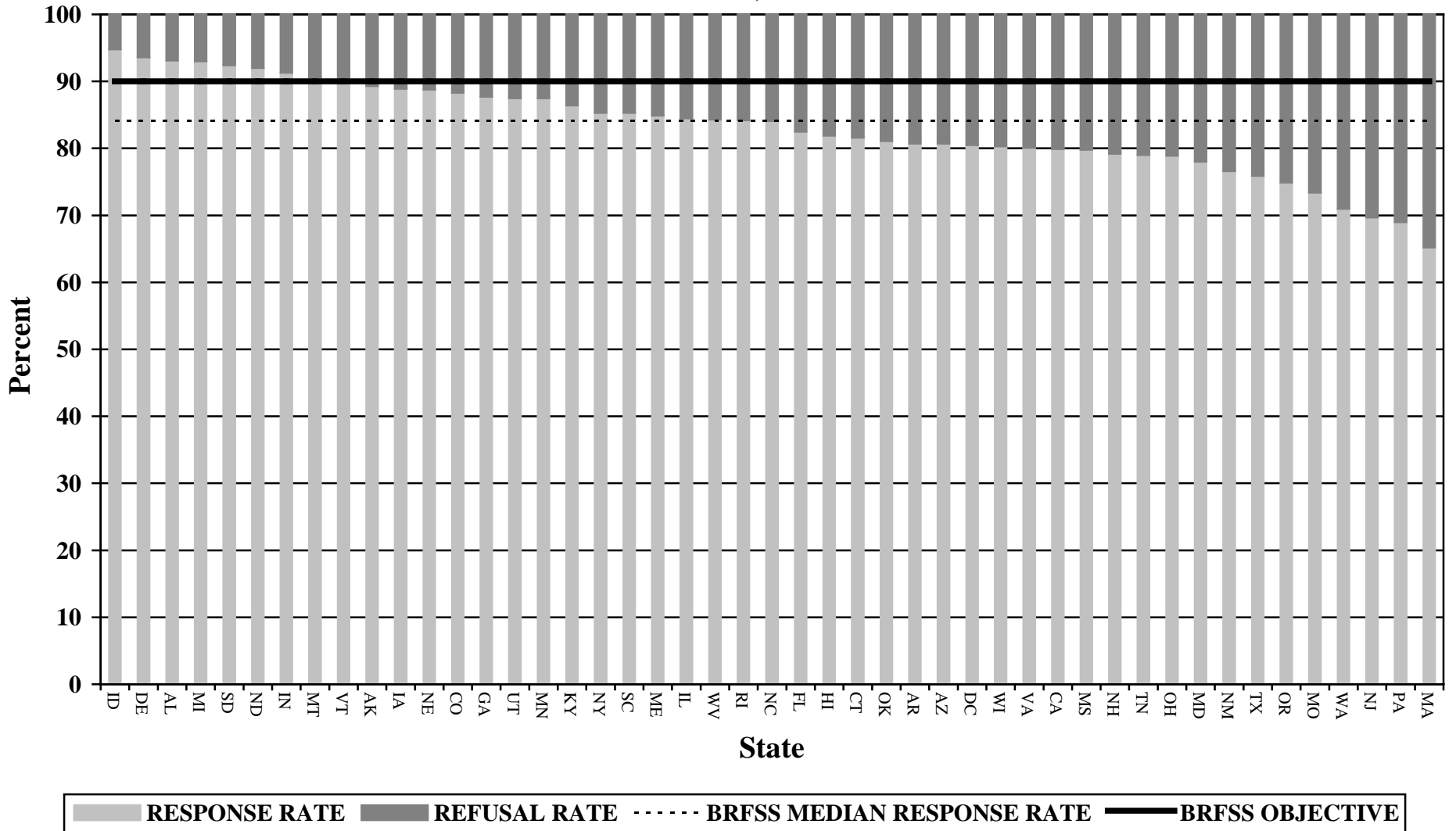
**BRFSS  
MEDIAN UPPER BOUND, CASRO, AND EFFICIENCY  
1987-1991**



**BRFSS  
CASRO ESTIMATES OF RESPONSE AND REFUSAL RATES  
BY STATE, 1991**



**BRFSS**  
**UPPERBOUND ESTIMATES OF RESPONSE AND REFUSAL RATES**  
**BY STATE, 1991**



**1991 BRFSS QUALITY CONTROL INDICATORS  
All PARTICIPATING STATES**

INDICATOR	BRFSS OBJECTIVE	OBJECTIVE		BRFSS MEDIAN
		MET	NOT MET	
CASRO RESPONSE RATE	>75		*	70.9
UPPER BOUND	>90		*	84.1
SURVEY EFFICIENCY	>40		*	37.1
% 01s DURING WIND DOWN	<5	*		4.5
% 02s	<10	*		6.7
% 04s	<10	*		9.4
% 07s	<3		*	3.8
% 10s	<0.3		*	0.4