2010

Behavioral Risk Factor Surveillance System

Asthma Call-Back Survey

Summary Data Quality Report

National
Asthma
Control
Program

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2010 Asthma Call-Back Survey (ACBS) Summary Data Quality Report

Introduction

Procedures for interview disposition and response rates for the BRFSS Asthma Call-Back Survey (ACBS) follow usual BRFSS procedures; however, some additions and adaptations are required for the call-back survey. Disposition codes, disposition code categories, and response rates are discussed in the sections below. Figure one is a flow chart describing the eligibility paths BRFSS respondents with asthma follow through the ACBS process.

Because asthma characteristics vary by season, a seasonal analysis must take into account any state for which interviewing was not conducted throughout the year. States may have interrupted interviewing due to contract interruptions with their data collection company. In addition, some ACBS interviews are finalized in the first few months of the next calendar year.

Appendix A includes tables showing disposition code categories, response rates and interviews by month for each state participating in the ACBS each year. Appendix B includes formulae for the BRFSS response rates for comparison with formulae for the ACBS rates. More detail on BRFSS response rates and procedures can be found in the BRFSS Data Quality Report Handbook (http://www.cdc.gov/brfss/technical_infodata/surveydata.htm) and the BRFSS Summary Data Quality Report (http://www.cdc.gov/brfss/technical_infodata/quality.htm) for each survey year. Appendix C includes additional instruction on assigning the ACBS specific disposition codes.

Disposition Codes

The usual BRFSS disposition codes are used for the ACBS. However, a few additional codes are needed to account for situations specific to a call-back survey. In the list below, disposition codes added for the ACBS are underlined and bolded. Detailed descriptions of the ACBS codes can be found in Appendix C.

The ACBS disposition codes are:

I. **Eligible, contacted: complete interview**

110 Complete
120 Partial complete

II. **Eligible, contacted: refusal or termination**

413 Refused to participate in the call-back during the BRFSS interview
210 Terminated within the questionnaire during the ACBS interview
211 Refused to allow combining ACBS responses with BRFSS responses
212 Refused to answer the “ever had asthma” question during the ACBS interview
220 Refused to begin the ACBS interview after contacted

III. **Eligible, lost to follow-up because unable to contact or communicate with the BRFSS respondent**

230 Selected respondent never reached or reached but did not begin interview during interviewing period
240 Selected respondent away from residence during the entire interviewing period
250 Language problem after respondent selection
260 Selected respondent physically or mentally unable to complete an interview during the entire interviewing period
270 Hang up or termination before respondent selection
280 Household contact after number of adults recorded but before respondent selection

305 Household members away from residence during entire interviewing period
306 Selected ACBS respondent no longer living in the BRFSS household
310 Hang-up or termination, known household
315 Household contact, eligibility undetermined
320 Language problem
325 Physical or mental impairment
330 Hang-up or termination, unknown if private residence
332 Contact, unknown if private residence
335 Telephone answering device, message confirming private residential status
345 Telephone answering device, unknown if private residence
360 No answer
365 Busy

505 Refusal: hang-up or termination
510 Appointment
515 Language problem
520 Physical or mental impairment
525 Answering machine, message confirming residential status
535 Answering machine, unknown if private residence
550 No answer
555 Busy

IV. **Eligible, lost to follow-up for technical reasons**

340 Telecommunication technological barrier, message confirming private residential status
350 Telecommunication technological barrier, unknown if private residence
355 Telephone number no longer in service or changed
370 On never call list

420 Not a private residence
430 Dedicated fax/data/modem line with no human contact
435 Cellular telephone
440 Fast busy
450 Non-working/disconnected number

530 Technological barrier other than answering machine, message confirming residential status
540 Technological barrier other than answering machine, unknown if private residence
545 Phone number temporarily out of service
575 Circuit busy
560 Fax/data/modem
565 Fast busy
570 Possible non-working number

580 Null attempt
585 Requires supervisor attention
599 Missing disposition code

V. **Ineligible**

291 No parent or legal guardian in the household (child ineligible)

405 Out-of-state
410 Household, no eligible respondent (respondent does not have asthma)
411 Selected respondent not eligible for follow-up
412 Transferred from BRFSS but not attempted (excluded by state)
470 Misdiagnosed asthma in respondent (2008 and later)
480 Not recruited for call-back at BRFSS interview (excluded by state)
490 Random child/adult selection: adult ineligible, child selected
491 Random child/adult selection: child ineligible, adult selected

Definitions and Labels for Disposition Code Categories

Because the ACBS is a call-back interview, all those identified with asthma at the BRFSS interview asthma are, with a few notable exceptions, eligible for the call-back survey. The ACBS eligibility flow chart (Figure 1) summarizes how BRFSS respondents are categorized for ACBS response rate calculation.

ACBS interviews are considered complete (COIN) if the respondents finish the entire interview or if they complete through section 8 of the ACBS interview. ACBS interviews are refusals if the respondent refuses participation at either the BRFSS interview or at the time of the ACBS interview. Terminations are interviews that start but are terminated during the interview.

The disposition codes that relate to contact problems or technology issues are considered “eligible, but lost to follow-up.” If they had been contacted, a small proportion of those eligible but lost to follow-up might actually be ineligible. All temporary disposition codes (numbered 500 or higher) that should have been resolved but were not are treated as comparable 400 level codes.

BRFSS respondents with asthma who are considered ineligible for the ACBS include those who are not asked to participate at the time of the BRFSS interview. Each year between 6% and 10% of those technically eligible are not asked to participate in the call-back survey. Respondents might not be asked for several reasons:

- States with split samples may only include respondents in the call-back if they are in specified splits of the BRFSS sample. Counts for states that exclude split-sample respondents are excluded from the following tables and rate calculations.
- The BRFSS respondent may partially complete the BRFSS interview but terminate before the call-back request.
- Specific state BRFSS call-back contracts may limit the number of call-back interviews due to budgetary constraints.
- States may stop conducting call-back interviews during contract negotiations.

BRFSS respondents with asthma who are asked to participate in the ACBS but are later classified as ineligible include:

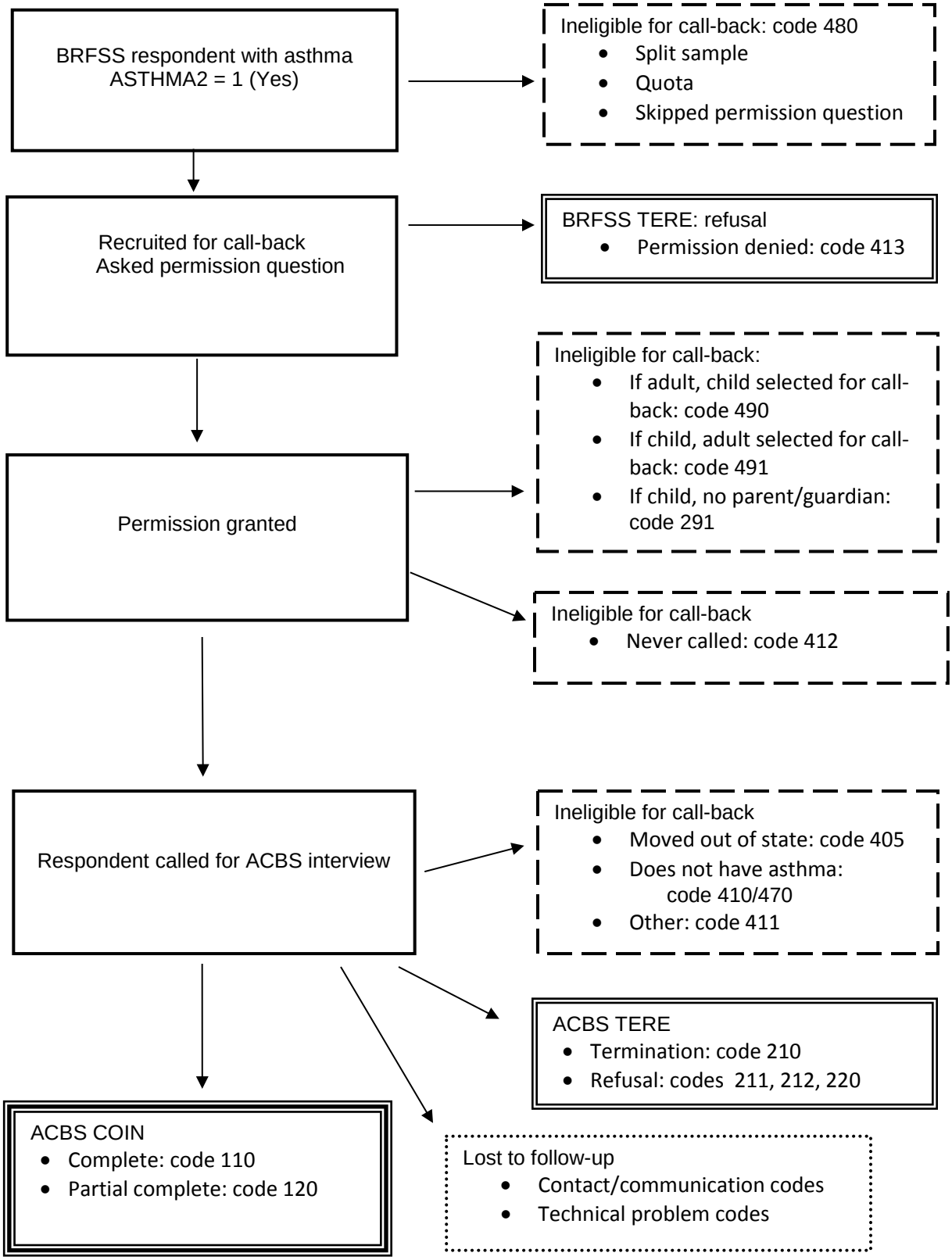
- respondents in households where both the selected adult and selected child in the household have asthma. When both have asthma, only one is eligible for the ACBS.
- respondents who move out-of-state between the BRFSS interview and the ACBS interview

- respondents who indicate, at the time of the ACBS interview, that the reported diagnosis of asthma was an error
- child respondents for whom the adult BRFSS respondent is not the child's parent or guardian
- some respondents in states that have reached a pre-specified quota for ACBS interviews

The following table indicates how disposition codes are grouped into response rate categories shown in the eligibility flow chart (Figure 1):

Category	Disposition Codes	Notes
Eligible COIN Completed interview	110, 120	Through section 8
Eligible TERE Terminations and refusals	**413**	At BRFSS interview
	210, **211**, **212**, 220	At ACBS
Eligible, lost to follow-up Not interviewed	230, 240, 250, 260, 270, 280, 305, **306**, 310, 315, 320, 325, 330, 332, 335, 345, 360, 365, 505, 510, 515, 520, 525, 535, 550, 555	Unable to contact or communicate with eligible respondent
	340, 350, 355, 370, 420, 430, 435, 440, 450, 530, 540, 545, 560, 565, 570, 575, 580, 585, 599	Technical problems
Ineligible	**291**, **480**, **490**, **491**	At BRFSS interview
	405, **410**, **411**, **470**	At ACBS
	412	No ACBS attempt

Figure 1: ACBS Eligibility Flow Chart:



ACBS Response Rates

The ACBS Interview Completion Rate is the proportion of completed interviews among eligible respondents who are actually contacted for and started the ACBS interview. Those who refuse at the initial BRFSS interview (413), those ineligible, and those never contacted are excluded from the denominator. This rate is based on actual contacts with the eligible respondent at the time of the call-back interview. The numerator of the rate includes completed interviews (COIN). The denominator of the rate includes completed interviews (COIN) plus the number contacted later for the ACBS interview who refuse or terminate the interview (disposition codes 210, 211, 212, and 220).

The ACBS Cooperation Rate is the proportion of completed interviews among all eligible respondents who are recruited and actually contacted for the ACBS interview. Eligible respondents who refuse the call-back at the time of the BRFSS interview are included. Non-contacts are excluded from the denominator, but contacts with communication problems specific to the respondent with asthma are included. The numerator of the rate includes completed interviews (COIN). The denominator of the rate includes completed interviews (COIN) plus refusals and terminations (TERE) plus the number of non-interviews that involved language problems with the respondent with asthma (250) or physical/mental impairment of the respondent with asthma (260). A Cooperation Rate below 65 percent may indicate some problem with interviewing techniques

The Refusal Rate is the percentage of all eligible respondents that refuse to be interviewed or terminate an interview early in the questionnaire. The numerator includes terminations and refusals (TERE). The denominator is the same as for the CASRO rate (below). The denominator includes completed interviews (COIN), terminations and refusals (TERE), and a proportion of those eligible but lost to follow-up. The proportion represents an estimate of the number of those lost to follow-up who would be expected to remain eligible if they had been contacted. The proportion of cases lost to follow-up that are estimated to be eligible is the same as the proportion of cases not lost to follow-up that are eligible. A Refusal Rate above 35 percent indicates some problem with interviewing techniques.

The Council of American Survey Research Organizations (CASRO) rate is a measure of respondent cooperation and is generally defined as the proportion of all eligible respondents in the sample for whom an interview has been completed. The numerator of the CASRO rate includes completed interviews (COIN). The denominator includes completed interviews (COIN), terminations and refusals (TERE), and a proportion of those eligible, but lost to follow-up. The proportion represents an estimate of the number of those lost to follow-up who would be expected to remain eligible if they had been contacted. The proportion of cases lost to follow-up that are estimated to be eligible is the same as the proportion of cases not lost to follow-up that are eligible. A CASRO rate below 40% should be cause for a review of data collection practices that could impact it, especially sample management and interviewer recruitment, retention, training, supervision, and monitoring.

Response rate formulae for the ACBS are specified below. Response rate tables for the ACBS, including response rates for each state participating in the ACBS, can be found in Appendix A. Response rate formulae for the BRFSS can be found in Appendix B

Response Rate Formulae for the ACBS

ACBS Interview Completion Rate:

$$\frac{110 + 120}{110 + 120 + 210 + \mathbf{\underline{211}} + \mathbf{\underline{212}} + 220}$$

ACBS Cooperation Rate:

$$\frac{110 + 120}{110 + 120 + 210 \mathbf{+ \underline{211} + \underline{212}} + 220 + \mathbf{\underline{413}} + 250 + 260}$$

ACBS CASRO Rate:

$$\frac{110 + 120}{[\ 110 + 120 + 210 \mathbf{+ \underline{211} + \underline{212}} + 220 + \mathbf{\underline{413}}\ ] + P * [\ \text{Eligible lost}\ ]}$$

ACBS Refusal Rate:

$$\frac{210 \mathbf{+ \underline{211} + \underline{212}} + 220 + \mathbf{\underline{413}}}{[\ 110 + 120 + 210 \mathbf{+ \underline{211} + \underline{212}} + 220 + \mathbf{\underline{413}}\ ] + P * [\ \text{Eligible lost}\ ]}$$

Where:

P (Proportion) = (COIN + ACBS TERE) / (COIN + ACBS TERE + ACBS Ineligible)

P = [(110+120) + (210+**211**+**212**+220)] / [(110+120) + (210+**211**+**212**+220) + (405+410+411+470)]

Eligible lost = 230, 240, 250, 260, 270, 280, 305, **306**, 310, 315, 320, 325, 330, 332, 335, 345, 360, 365, 370, 505, 510, 515, 520, 525, 535, 550, 555, 340, 350, 355, 370, 420, 430, 435, 440, 450, 530, 540, 545, 560, 565, 570, 575, 580, 585, 599

Appendix A:

List of Tables in the 2010 BRFSS ACBS Summary Data Quality Report

Table 1.1 2010 ACBS Disposition Categories by State: Adults
Table 1.2 2010 ACBS Disposition Categories by State: Children

Table 2.1 2010 ACBS Response Rates by State: Adults
Table 2.2 2010 ACBS Response Rates by State: Children

Table 3.1 2010 ACBS Completed Interviews by State and Month: Adults
Table 3.2 2010 ACBS Completed Interviews by State and Month: Children

Table 1.1 ACBS 2010 Disposition Categories by State: Adults

	BRFSS asthma	Ineligible		Recruited for call-back				Ineligible		Total called	Eligible				Ineligible
		Not recruited		Refused BRFSS TERE		Agreed		Child selected	Never called		COIN	ACBS TERE	Lost to follow-up		
													Contact	Technical	
ALABAMA	936	29	3.1%	207	22.1%	700	74.8%	13	29	658	394	42	165	34	23
ARIZONA	872	63	7.2%	188	21.6%	621	71.2%	17	9	595	393	85	78	27	12
CALIFORNIA	2,468	343	13.9%	885	35.9%	1,240	50.2%	3	242	995	680	52	184	40	39
CONNECTICUT	957	58	6.1%	289	30.2%	610	63.7%	27	7	576	354	94	107	14	7
DISTRICT OF COLUMBIA	610	50	8.2%	164	26.9%	396	64.9%	10	6	380	214	68	79	17	2
FLORIDA*	1,614	222	13.8%	328	20.3%	1,064	65.9%	0	70	994	600	102	234	42	16
GEORGIA	683	56	8.2%	162	23.7%	465	68.1%	6	11	448	232	17	186	13	0
HAWAII	1,069	46	4.3%	362	33.9%	661	61.8%	31	28	602	453	20	70	10	49
ILLINOIS	643	17	2.6%	142	22.1%	484	75.3%	17	160	307	227	7	64	3	6
INDIANA	1,433	96	6.7%	352	24.6%	985	68.7%	39	1	945	667	77	171	15	15
IOWA	657	26	4.0%	141	21.5%	490	74.6%	9	2	479	352	25	81	12	9
KANSAS	1,025	16	1.6%	228	22.2%	781	76.2%	24	14	743	575	10	149	9	0
LOUISIANA	775	10	1.3%	208	26.8%	557	71.9%	21	2	534	266	41	184	36	7
MAINE	1,203	65	5.4%	271	22.5%	867	72.1%	17	2	848	655	73	103	6	11
MARYLAND	1,120	47	4.2%	269	24.0%	804	71.8%	19	157	628	382	22	209	15	0
MASSACHUSETTS*	851	86	10.1%	193	22.7%	572	67.2%	13	19	540	298	13	209	20	0
MICHIGAN	1,320	39	3.0%	361	27.3%	920	69.7%	30	1	889	719	39	107	6	18
MISSISSIPPI	1,002	36	3.6%	237	23.7%	729	72.8%	17	51	661	435	28	150	32	16
MISSOURI	747	40	5.4%	199	26.6%	508	68.0%	17	9	482	356	12	89	11	14
MONTANA	940	43	4.6%	201	21.4%	696	74.0%	24	5	667	459	48	134	15	11
NEBRASKA	1,663	49	2.9%	474	28.5%	1,140	68.6%	28	3	1,109	826	60	182	14	27
NEVADA*	551	41	7.4%	187	33.9%	323	58.6%	0	8	315	211	5	88	11	0
NEW HAMPSHIRE*	881	33	3.7%	261	29.6%	587	66.6%	0	2	585	376	90	84	23	12
NEW JERSEY	1,595	140	8.8%	382	23.9%	1,073	67.3%	28	23	1,022	472	30	494	23	3
NEW MEXICO	962	34	3.5%	239	24.8%	689	71.6%	22	19	648	460	25	132	15	16
NEW YORK*	424	22	5.2%	107	25.2%	295	69.6%	11	0	284	187	30	59	6	2
NORTH DAKOTA	495	34	6.9%	127	25.7%	334	67.5%	6	2	326	240	30	44	10	2
OHIO	1,315	103	7.8%	360	27.4%	852	64.8%	12	13	827	475	27	300	25	0
OKLAHOMA	1,075	26	2.4%	307	28.6%	742	69.0%	26	4	712	457	35	169	32	19
OREGON	796	74	9.3%	190	23.9%	532	66.8%	19	13	500	336	10	139	15	0
PENNSYLVANIA	1,519	321	21.1%	363	23.9%	835	55.0%	17	82	736	545	55	120	13	3
RHODE ISLAND	1,033	29	2.8%	260	25.2%	744	72.0%	32	9	703	442	104	125	22	10
TEXAS	2,281	153	6.7%	536	23.5%	1,592	69.8%	54	22	1,516	984	176	292	40	24
UTAH	1,384	69	5.0%	350	25.3%	965	69.7%	47	6	912	649	42	182	24	15
VERMONT	1,023	46	4.5%	255	24.9%	722	70.6%	17	2	703	557	30	101	11	4
WASHINGTON*	3,064	90	2.9%	397	13.0%	2,577	84.1%	132	1,005	1,440	1,045	56	233	75	31
WEST VIRGINIA	444	2	0.5%	66	14.9%	376	84.7%	13	2	361	264	9	69	6	13
WISCONSIN	642	84	13.1%	112	17.4%	446	69.5%	13	6	427	303	23	87	7	7
PUERTO RICO*	525	4	0.8%	113	21.5%	408	77.7%	0	33	375	213	19	108	28	7
39 AREA TOTAL	**42,597**	**2,742**	**6.4%**	**10,473**	**24.6%**	**29,382**	**69.0%**	**831**	**2,079**	**26,472**	**17,753**	**1,731**	**5,761**	**777**	**450**

NOTES
* Florida only included respondents in version 1 of the sample split and did not include children.
* Massachusetts only included respondents in version 1 of the sample split.
* Nevada did not include children.
* New Hampshire did not include children.
* New York only included respondents in version 1 of the sample split.
* Washington only interviewed a random sample of adult BRFSS respondents who agreed to the call-back.
* Puerto Rico did not include children.

Table 1.2 ACBS 2010 Disposition Categories by State: Children

STATE	BRFSS asthma respondent	Ineligible		Recruited for call-back				Ineligible		Total called	Eligible				Ineligible
		Not recruited		Refused BRFSS TERE		Agreed		Adult selected[1]	Never called		COIN	ACBS TERE	Lost to follow-up		
													Contact	Technical	
ALABAMA*	269	48	17.8%	34	12.6%	187	69.5%	33	23	131	68	8	41	13	1
ARIZONA*	155	5	3.2%	23	14.8%	127	81.9%	24	23	80	38	20	17	3	2
CALIFORNIA*	212	67	31.6%	54	25.5%	91	42.9%	27	6	58	32	0	16	5	5
CONNECTICUT	273	3	1.1%	78	28.6%	192	70.3%	24	13	155	85	29	34	6	1
DISTRICT OF COLUMBIA*	124	6	4.8%	24	19.4%	94	75.8%	13	11	70	36	8	18	2	6
GEORGIA	167	1	0.6%	48	28.7%	118	70.7%	26	0	92	77	4	11	0	0
HAWAII	315	41	13.0%	82	26.0%	192	61.0%	36	10	146	104	1	23	3	15
ILLINOIS*	178	18	10.1%	23	12.9%	137	77.0%	10	30	97	67	5	24	1	0
INDIANA	336	38	11.3%	62	18.5%	236	70.2%	42	0	194	120	20	50	2	2
IOWA*	132	13	9.8%	18	13.6%	101	76.5%	15	0	86	66	1	13	2	4
KANSAS	254	17	6.7%	41	16.1%	196	77.2%	35	3	158	111	2	45	0	0
LOUISIANA*	227	26	11.5%	38	16.7%	163	71.8%	21	0	142	73	8	51	9	1
MAINE*	128	10	7.8%	22	17.2%	96	75.0%	17	0	79	61	4	10	1	3
MARYLAND	280	3	1.1%	73	26.1%	204	72.9%	24	66	114	97	5	11	1	0
MASSACHUSETTS* **	152	9	5.9%	44	28.9%	99	65.1%	33	0	66	60	1	5	0	0
MICHIGAN	299	0	0.0%	58	19.4%	241	80.6%	48	1	192	146	5	20	3	2
MISSISSIPPI	271	46	17.0%	27	10.0%	198	73.1%	35	4	159	96	7	37	15	4
MISSOURI*	192	21	10.9%	40	20.8%	131	68.2%	32	1	98	65	8	20	4	1
MONTANA	182	17	9.3%	29	15.9%	136	74.7%	19	0	117	81	9	24	1	2
NEBRASKA	340	26	7.6%	61	17.9%	253	74.4%	52	2	199	143	4	44	0	8
NEW JERSEY	337	12	3.6%	107	31.8%	218	64.7%	56	0	162	149	6	7	0	0
NEW MEXICO	254	31	12.2%	33	13.0%	190	74.8%	33	13	144	93	8	34	5	3
NEW YORK* **	94	8	8.5%	21	22.3%	65	69.1%	9	0	56	39	7	10	0	0
NORTH DAKOTA*	124	16	12.9%	25	20.2%	83	66.9%	10	0	73	57	7	7	1	1
OHIO*	170	5	2.9%	67	39.4%	98	57.6%	21	0	77	69	3	5	0	0
OKLAHOMA	297	39	13.1%	33	11.1%	225	75.8%	35	13	177	90	11	66	9	1
OREGON*	129	27	20.9%	12	9.3%	90	69.8%	4	5	81	50	0	28	3	0
PENNSYLVANIA	367	86	23.4%	59	16.1%	222	60.5%	33	27	162	117	8	32	5	0
RHODE ISLAND*	254	0	0.0%	43	16.9%	211	83.1%	37	21	153	68	31	45	5	4
TEXAS	665	100	15.0%	113	17.0%	452	68.0%	68	3	381	208	54	101	13	5
UTAH	432	42	9.7%	84	19.4%	306	70.8%	37	1	268	183	22	46	10	6
VERMONT	226	2	0.9%	51	22.6%	173	76.5%	33	2	138	110	2	22	1	3
WASHINGTON	536	6	1.1%	63	11.8%	467	87.1%	0	5	462	291	22	111	27	11
WEST VIRGINIA*	102	13	12.7%	5	4.9%	84	82.4%	16	0	68	47	1	18	2	0
WISCONSIN*	153	24	15.7%	25	16.3%	104	68.0%	19	1	84	44	8	27	4	1
35 AREA TOTAL	**8,626**	**826**	**9.6%**	**1,620**	**18.8%**	**6,180**	**71.6%**	**977**	**284**	**4,919**	**3,241**	**339**	**1,073**	**156**	**92**
18 WEIGHTED AREA TOTAL	**5,831**	**510**	**8.7%**	**1,102**	**18.9%**	**4,219**	**72.4%**	**636**	**163**	**3,420**	**2,301**	**219**	**718**	**101**	**63**

[1] Includes child without parent/guaridian

NOTES

* Child data for Alabama, Arizona, California, DC, Illinois, Iowa, Louisiana, Maine, Massachusetts, Missouri, New York, North Dakota, Ohio, Oregon, Rhode Island, West Virginia, and Wisconsin are not included in the file because there were too few records (<75) to produce reliable weights.

** Massachusetts only included respondents in version 1 of the sample split.
** New York only included respondents in version 1 of the sample split.

Table 2.1 ACBS 2010 Response Rates by State: Adults

STATE	Completion Rate	Cooperation Rate	Refusal Rate	CASRO Rate
ALABAMA	90.4%	61.3%	29.9%	47.4%
ARIZONA	82.2%	58.5%	35.5%	51.1%
CALIFORNIA	92.9%	42.0%	51.2%	37.2%
CONNECTICUT	79.0%	47.8%	44.7%	41.4%
DISTRICT OF COLUMBIA	75.9%	47.5%	42.9%	39.5%
FLORIDA	85.5%	56.6%	33.1%	46.2%
GEORGIA	93.2%	56.5%	29.3%	38.0%
HAWAII	95.8%	54.3%	42.1%	49.9%
ILLINOIS	97.0%	60.2%	33.8%	51.4%
INDIANA	89.7%	59.8%	33.6%	52.2%
IOWA	93.4%	67.4%	27.3%	57.8%
KANSAS	98.3%	70.6%	24.5%	59.2%
LOUISIANA	86.6%	51.7%	34.1%	36.4%
MAINE	90.0%	65.0%	31.1%	59.2%
MARYLAND	94.6%	56.8%	32.4%	42.6%
MASSACHUSETTS	95.8%	59.1%	28.1%	40.7%
MICHIGAN	94.9%	63.7%	32.5%	58.5%
MISSISSIPPI	94.0%	62.1%	30.3%	49.7%
MISSOURI	96.7%	62.7%	31.8%	53.7%
MONTANA	90.5%	64.7%	29.2%	53.8%
NEBRASKA	93.2%	60.7%	34.5%	53.3%
NEVADA	97.7%	52.4%	38.3%	42.0%
NEW HAMPSHIRE	80.7%	51.7%	42.2%	45.2%
NEW JERSEY	94.0%	53.4%	29.5%	33.8%
NEW MEXICO	94.9%	63.2%	30.5%	53.1%
NEW YORK	86.2%	57.2%	35.3%	48.2%
NORTH DAKOTA	88.9%	60.2%	34.8%	53.3%
OHIO	94.6%	55.1%	32.6%	40.0%
OKLAHOMA	92.9%	57.2%	34.5%	46.0%
OREGON	97.1%	62.7%	29.0%	48.7%
PENNSYLVANIA	90.8%	55.8%	38.2%	49.8%
RHODE ISLAND	81.0%	54.4%	38.3%	46.5%
TEXAS	84.8%	57.2%	35.2%	48.7%
UTAH	93.9%	62.2%	31.6%	52.2%
VERMONT	94.9%	65.6%	29.9%	58.4%
WASHINGTON	94.9%	68.6%	25.2%	58.1%
WEST VIRGINIA	96.7%	77.7%	18.3%	64.3%
WISCONSIN	92.9%	68.9%	25.5%	57.2%
PUERTO RICO	91.8%	61.6%	27.7%	44.7%
39 AREA TOTAL	**91.1%**	**58.9%**	**33.6%**	**48.8%**
Median	**93.2%**	**59.8%**	**32.5%**	**49.7%**

Table 2.2 ACBS 2010 Response Rates by State: Children

STATE	Completion Rate	Cooperation Rate	Refusal Rate	CASRO Rate
ALABAMA*	89.5%	61.8%	25.7%	41.6%
ARIZONA*	65.5%	45.2%	42.9%	37.9%
CALIFORNIA*	100.0%	37.2%	51.8%	30.7%
CONNECTICUT	74.6%	43.8%	46.2%	36.7%
DISTRICT OF COLUMBIA*	81.8%	52.9%	37.4%	42.1%
GEORGIA	95.1%	59.7%	37.1%	55.0%
HAWAII	99.1%	55.6%	39.6%	49.6%
ILLINOIS*	93.1%	70.5%	23.3%	55.8%
INDIANA	85.7%	58.8%	32.4%	47.4%
IOWA*	98.5%	77.7%	19.2%	66.6%
KANSAS	98.2%	72.1%	21.6%	55.8%
LOUISIANA*	90.1%	61.3%	25.8%	41.0%
MAINE*	93.9%	70.1%	26.7%	62.6%
MARYLAND	95.1%	55.4%	41.7%	51.9%
MASSACHUSETTS*	98.4%	57.1%	40.9%	54.6%
MICHIGAN	96.7%	69.9%	27.2%	63.0%
MISSISSIPPI	93.2%	73.9%	18.9%	53.3%
MISSOURI*	89.0%	57.5%	35.1%	47.6%
MONTANA	90.0%	68.1%	26.5%	56.5%
NEBRASKA	97.3%	68.1%	26.0%	57.3%
NEW JERSEY	96.1%	56.9%	42.0%	55.4%
NEW MEXICO	92.1%	69.4%	23.9%	54.1%
NEW YORK*	84.8%	58.2%	36.4%	50.7%
NORTH DAKOTA*	89.1%	64.0%	33.0%	58.8%
OHIO*	95.8%	49.6%	48.6%	47.9%
OKLAHOMA	89.1%	67.2%	21.1%	43.2%
OREGON*	100.0%	80.7%	12.9%	53.8%
PENNSYLVANIA	93.6%	63.2%	30.3%	52.9%
RHODE ISLAND*	68.7%	47.6%	38.9%	35.8%
TEXAS	79.4%	55.0%	34.3%	42.7%
UTAH	89.3%	63.3%	30.9%	53.3%
VERMONT	98.2%	67.5%	28.6%	59.3%
WASHINGTON	93.0%	75.4%	16.7%	57.1%
WEST VIRGINIA*	97.9%	88.7%	8.2%	64.4%
WISCONSIN*	84.6%	57.1%	30.7%	41.0%
35 AREA TOTAL	**90.5%**	**62.0%**	**30.6%**	**50.7%**
35 AREA MEDIAN	**93.1%**	**61.8%**	**30.7%**	**53.3%**
18 WEIGHTED AREA TOTAL	**91.3%**	**63.2%**	**29.9%**	**52.1%**
18 WEIGHTED AREA MEDIAN	**93.4%**	**65.2%**	**29.5%**	**53.7%**

° Child data for Alabama, Arizona, California, DC, Illinois, Iowa, Louisiana, Maine, Massachusetts, Missouri, New York, North Dakota, Ohio, Oregon, Rhode Island, West Virginia, and Wisconsin are not included in the file because there were too few records (<75) to produce reliable weights.

Table 3.1 2010 ACBS Completed Interviews by State and Month: Adults

STATE	2010												2011			Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
ALABAMA	.	23	45	41	35	.	76	29	38	.	65	38	4	.	.	**394**
ARIZONA	.	.	79	31	52	26	30	25	35	29	43	34	9	.	.	**393**
CALIFORNIA	.	51	83	66	103	52	116	94	19	56	40	.	.	.	.	**680**
CONNECTICUT	.	.	58	26	28	22	20	19	29	38	40	57	17	.	.	**354**
DISTRICT OF COLUMBIA	.	.	34	23	23	16	16	27	16	12	22	24	1	.	.	**214**
FLORIDA	.	38	42	45	36	50	49	51	51	33	61	59	84	1	.	**600**
GEORGIA	.	36	21	21	19	15	21	23	22	16	22	16	.	.	.	**232**
HAWAII	.	39	45	65	81	32	17	31	34	37	27	37	8	.	.	**453**
ILLINOIS	.	37	18	2	.	.	16	17	35	49	21	14	18	.	.	**227**
INDIANA	30	46	33	32	54	60	50	68	71	72	90	55	6	.	.	**667**
IOWA	.	26	52	13	35	29	25	27	29	35	30	25	26	.	.	**352**
KANSAS	50	57	55	45	38	35	60	42	42	59	45	40	7	.	.	**575**
LOUISIANA	.	.	22	22	38	8	30	6	34	8	38	11	.	49	.	**266**
MAINE	57	71	59	38	38	42	49	68	57	57	43	66	10	.	.	**655**
MARYLAND	.	61	29	27	48	26	34	43	36	27	28	22	1	.	.	**382**
MASSACHUSETTS	.	43	50	35	18	17	27	19	29	22	23	14	1	.	.	**298**
MICHIGAN	8	70	67	39	91	60	45	62	54	63	65	45	42	8	.	**719**
MISSISSIPPI	.	44	52	34	20	48	41	41	26	32	56	37	4	.	.	**435**
MISSOURI	11	32	25	32	19	24	23	29	20	46	56	32	7	.	.	**356**
MONTANA	.	34	67	17	33	35	48	37	35	42	35	33	43	.	.	**459**
NEBRASKA	.	64	136	27	68	67	76	72	55	67	54	63	77	.	.	**826**
NEVADA	.	19	18	28	16	21	16	22	9	14	19	11	18	.	.	**211**
NEW HAMPSHIRE	.	.	70	27	48	18	32	27	33	25	33	53	10	.	.	**376**
NEW JERSEY	.	56	68	59	30	30	41	27	45	44	40	31	1	.	.	**472**
NEW MEXICO	.	9	39	54	19	32	24	49	48	41	44	50	43	8	.	**460**
NEW YORK	7	11	8	13	13	11	16	15	14	26	25	25	3	.	.	**187**
NORTH DAKOTA	7	28	15	29	18	24	13	16	31	22	22	12	3	.	.	**240**
OHIO	.	79	73	39	47	33	23	27	21	42	41	46	4	.	.	**475**
OKLAHOMA	.	.	63	46	38	36	28	78	4	40	33	31	58	2	.	**457**
OREGON	21	25	13	13	16	47	49	49	32	11	20	38	2	.	.	**336**
PENNSYLVANIA	22	25	30	37	51	37	65	2	73	63	54	80	6	.	.	**545**
RHODE ISLAND	.	.	65	56	66	49	39	16	36	20	38	39	18	.	.	**442**
TEXAS	41	46	151	74	75	73	78	79	86	57	74	103	47	.	.	**984**
UTAH	.	.	.	.	116	76	109	78	64	42	80	50	34	.	.	**649**
VERMONT	33	40	47	42	40	58	44	48	51	46	44	54	10	.	.	**557**
WASHINGTON	.	97	114	143	114	42	113	93	65	49	109	98	8	.	.	**1,045**
WEST VIRGINIA	.	23	26	25	26	13	16	17	28	29	20	41	.	.	.	**264**
WISCONSIN	.	5	27	16	10	7	21	14	10	33	56	38	60	6	.	**303**
PUERTO RICO	.	.	.	.	.	.	.	.	.	.	41	96	76	.	.	**213**
39 AREA TOTAL	**287**	**1,235**	**1,899**	**1,382**	**1,620**	**1,271**	**1,596**	**1,487**	**1,417**	**1,404**	**1,697**	**1,618**	**766**	**74**	**0**	**17,753**

Table 3.2 2010 ACBS Completed Interviews by State and Month: Children

STATE	2010												2011				Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
ALABAMA*	.	5	1	.	5	6	11	6	8	1	15	8	2	.	.	.	**68**
ARIZONA*	.	.	11	3	2	1	3	.	2	3	5	8	.	.	.	.	**38**
CALIFORNIA*	.	2	4	4	2	1	4	4	1	2	2	3	3	.	.	.	**32**
CONNECTICUT	.	.	16	3	2	5	4	2	8	8	8	25	4	.	.	.	**85**
DISTRICT OF COLUMBIA*	.	.	7	1	3	4	4	1	6	2	3	5	.	.	.	.	**36**
GEORGIA	.	7	7	10	7	5	6	6	7	9	11	2	.	.	.	.	**77**
HAWAII	.	7	8	19	18	9	8	10	4	4	6	10	1	.	.	.	**104**
ILLINOIS*	.	13	3	.	.	.	2	7	10	8	2	5	17	.	.	.	**67**
INDIANA	5	6	11	10	9	4	14	7	11	13	19	8	3	.	.	.	**120**
IOWA*	.	6	15	3	5	2	5	1	10	7	4	4	4	.	.	.	**66**
KANSAS	12	16	11	7	4	7	7	17	7	9	8	4	2	.	.	.	**111**
LOUISIANA*	.	.	12	4	14	5	3	1	5	3	13	2	.	10	1	.	**73**
MAINE*	3	7	7	2	6	3	5	5	3	5	7	7	1	.	.	.	**61**
MARYLAND	.	18	12	8	12	7	10	8	5	6	4	7	.	.	.	.	**97**
MASSACHUSETTS*	.	11	7	12	2	3	6	4	3	2	8	2	.	.	.	.	**60**
MICHIGAN	1	15	17	12	18	10	10	15	13	11	10	5	8	1	.	.	**146**
MISSISSIPPI	.	11	11	9	4	10	8	9	4	8	11	7	4	.	.	.	**96**
MISSOURI*	1	5	5	3	4	12	2	2	7	2	16	4	2	.	.	.	**65**
MONTANA	.	4	16	3	7	6	4	7	5	7	12	5	5	.	.	.	**81**
NEBRASKA	.	13	16	3	4	14	17	10	12	16	16	6	16	.	.	.	**143**
NEW JERSEY	.	18	18	20	13	8	13	7	10	13	16	13	.	.	.	.	**149**
NEW MEXICO	.	.	9	12	3	4	4	4	13	11	10	14	7	2	.	.	**93**
NEW YORK*	2	8	2	1	5	2	3	4	1	2	5	4	.	.	.	.	**39**
NORTH DAKOTA*	.	10	4	4	9	5	3	3	4	5	6	3	1	.	.	.	**57**
OHIO*	.	12	23	5	1	7	1	1	1	6	3	9	.	.	.	.	**69**
OKLAHOMA	.	.	14	9	9	12	14	9	1	5	1	4	12	.	.	.	**90**
OREGON*	2	2	1	2	3	6	6	10	4	2	2	9	1	.	.	.	**50**
PENNSYLVANIA	3	10	4	9	11	7	9	2	14	15	12	19	2	.	.	.	**117**
RHODE ISLAND*	.	.	9	10	9	10	6	1	8	4	3	7	1	.	.	.	**68**
TEXAS	14	24	22	22	14	18	15	12	16	8	20	9	14	.	.	.	**208**
UTAH	.	.	.	.	22	16	22	24	26	13	25	20	15	.	.	.	**183**
VERMONT	5	13	7	8	9	14	6	6	16	6	7	11	2	.	.	.	**110**
WASHINGTON	.	27	24	34	17	23	35	27	18	25	30	28	3	.	.	.	**291**
WEST VIRGINIA*	.	7	5	3	2	3	5	3	3	4	2	10	.	.	.		**47**
WISCONSIN*	.	6	3	1	.	.	4	.	2	4	6	8	9	1	.		**44**
35 AREA TOTAL	**48**	**283**	**342**	**256**	**255**	**249**	**279**	**235**	**268**	**249**	**328**	**295**	**139**	**14**	**1**	**0**	**3,241**
18 WEIGHTED AREA TOTAL	**40**	**189**	**223**	**198**	**183**	**179**	**206**	**182**	**190**	**187**	**226**	**197**	**98**	**3**	**0**	**0**	**2,301**

* Child data for Alabama, Arizona, California, DC, Illinois, Iowa, Louisiana, Maine, Massachusetts, Missouri, New York, North Dakota, Ohio, Oregon, Rhode Island, West Virginia, and Wisconsin are not included in the file because there were too few records (<75) to produce reliable weights.

Appendix B: BRFSS Response Rate Formulae

BRFSS CASRO Response Rate Formula

Completes = Completed or Partially Completed Interviews
Completes = (110+120+(210×.32))

Eligible=All respondents with known eligibility status categorized as eligible
Eligible = (110+120+210+220+230+240+250+260+270+280)

Ineligible= All respondents with known eligibility status categorized as ineligible
Ineligible=(405+410+420+430+435+440+450)

Unknown=All respondents with unknown eligibility status
Unknown=(305+310+315+320+325+330+332+335+340+345+350+355+360+365+370)

UNKNDNOM=Unknown respondents added to the denominator
UNKNDNOM = (Eligible/(Eligible + Ineligible)) × Unknown

CASRO = (Completes / (Eligible + UNKNDNOM))

BRFSS Overall Response Rate Formula

Completes = Completed or Partially Completed Interviews
Completes = (110+120+(210×.32))

Break-offs and Refusals = ((210×.68)+220)
Known Households = (230+240+250+260+270+280+305+310+315+335)
Ineligible Households = 410
All Likely Households= (345+350+320+325+330+332+340+370+355)

Households = (Known Households+Ineligible Households+Completes+Break-offs and Refusals+(.90×All Likely Households))
Eligible Households = (.98×Households)

Overall Response Rate = (Completes/Eligible Households)

BRFSS Cooperation Rate Formula

Completes = Completed or Partially Completed Interviews
Completes = (110+120+(210×.32))

Break-offs and Refusals = ((210×.68)+220)

Cooperation Rate = (Completes/(Completes+Break-offs and Refusals+250+260))

Appendix C: Instructions for Assigning Additional ACBS Disposition Codes

Following are descriptions of the ACBS disposition codes adapted from standard BRFSS disposition codes and the ACBS disposition codes added to the standard set of BRFSS disposition codes. For detailed definitions for the standard BRFSS disposition codes see the Data Quality Handbook for each survey year (http://www.cdc.gov/brfss/technical_infodata/surveydata.htm).

I. Eligible, contacted: complete interview

110 Complete
Definition: Respondent completes the ACBS interview through the last question.

120 Partial complete
Definition: Respondent completes the ACBS interview at least through Section 8 (medications).

II. Eligible, contacted: refusal

210 Terminated within the questionnaire during the ACBS interview
Definition: If the respondent is contacted for the ACBS and terminates after the interview begins (section 3) but before completing section 8, then record is considered incomplete and is assigned disposition code 210.

211 Refused to allow combining ACBS responses with BRFSS responses
Definition: Some states require that the respondent provide active approval to combine their responses from the initial BRFSS interview with their responses from the ACBS interview. This approval may be requested at either the initial BRFSS interview or at the beginning of the ACBS interview. If the respondent does not approve combining data from the two interviews, the record is assigned disposition code 211.

212 Refused to answer the “ever had asthma” question during the ACBS interview
Definition: The selected respondent is contacted for the ACBS interview but refuses to answer the initial asthma question. If the respondent answers "don't know" or "refused" to the ACBS question EVER-ASTH (2.1) “Have you ever been told by a doctor or other health professional that (you have/sample child has) asthma?”, then the record is assigned code 212.

220 Refused to begin the ACBS interview after contacted
Definition: If the selected respondent is contacted for the ACBS interview but refuses to begin the interview, then the record is assigned code 220.

413 Refused to participate in the call-back during the BRFSS interview
Definition: During the BRFSS interview, respondents who indicate they have ever been told by a doctor that they have asthma are asked if they will participate in an additional survey at a later date. Some state Institutional Review Boards (IRBs) require that the content of the additional survey (asthma) be disclosed; other state IRBs require that the specific content not be disclosed. Some states have multiple call-back surveys in the field and do not specify the content of any of the call-back interviews. If a respondent refuses to participate in the call-back survey, that record is assigned disposition code 413.

III. Eligible, lost to follow-up because unable to contact or communicate with the BRFSS respondent

306 Selected ACBS respondent no longer living in the BRFSS household

Definition: The BRFSS respondent with asthma left the BRFSS household between the BRFSS interview and the ACBS interview. If the selected respondent (from the BRFSS) no longer lives in the BRFSS household but did live in the household during the BRFSS interview, then attempts should be made to obtain new contact information for the selected respondent, and the follow-up should be conducted using the new telephone number. If this is not possible or the household refuses to provide new contact information, then the record is assigned disposition code 306.

Refer to the Data Quality Handbook for each survey year for the definitions of all other codes in this category (http://www.cdc.gov/brfss/technical_infodata/surveydata.htm).

IV. Eligible, lost to follow-up for technical reasons

Refer to the Data Quality Handbook for each survey year for the definitions of all codes in this category (http://www.cdc.gov/brfss/technical_infodata/surveydata.htm).

V. Ineligible

291 No parent or legal guardian in the household (child ineligible)
Definition: This code applies only to the child ACBS interview. The child selected during the BRFSS interview is eligible for the ACBS (the BRFSS respondent indicated that the selected child has an asthma diagnosis). However, ACBS child protocol requires that the BRFSS respondent must be the parent or guardian of the child to provide proxy responses for the child or to approve transfer to a more knowledgeable proxy respondent. If the BRFSS respondent is not the parent or guardian of the selected child with asthma, the child is ineligible for the ACBS. The child record is assigned disposition code 291.

405 Out-of-state
Definition: The BRFSS question that determines eligibility for the ACBS is “Have you ever been told by a doctor, nurse, or other health professional that (you have/the sample child has) asthma?” Respondents who answer “yes” are eligible for the ACBS. If the respondent is a state resident at the time of the BRFSS interview, but moves to an out-of-state residence between the BRFSS interview and the ACBS interview, then the respondent is no longer eligible for the ACBS, and the record is assigned disposition code 405.

410 Household, no eligible respondent (respondent does not have asthma)
Definition: The BRFSS question that determines eligibility for the ACBS is “Have you ever been told by a doctor, nurse, or other health professional that (you have/the sample child has) asthma?” Respondents who answer “yes” are eligible for the ACBS. If the respondent informs the ACBS interviewer that the recorded response from the BRFSS interview was in error and terminates the call, then the respondent is not eligible for the ACBS, and the record is assigned disposition code 410.

411 Selected respondent not eligible for follow-up
Definition: If the respondent disagrees with the recorded response to the asthma question from the BRFSS interview and answers “no” to the ACBS question EVER-ASTH (2.1) “Have you ever been told by a doctor or other health professional that (you have/the sample child has) asthma?”, then the respondent is not eligible for the ACBS, and the record is assigned disposition code 411.

412 Transferred from BRFSS but not attempted (excluded by state)
Definition: The BRFSS question that determines eligibility for the ACBS is “Have you ever been told by a doctor, nurse, or other health professional that (you have/the sample child has) asthma?” Respondents who answer “yes” are eligible for the ACBS. Eligible respondents are then asked for permission to call back. Those that agree should be called for the

ACBS interview. However, if a respondent eligible to be called is transferred from BRFSS to the ACBS but never called, then the record is assigned disposition code 412.

470 Misdiagnosed asthma in respondent (2008 and later)
Definition: The BRFSS question that determines eligibility for the ACBS is "Have you ever been told by a doctor, nurse, or other health professional that (you have/the sample child has) asthma?" Respondents who answer "yes" are eligible for the ACBS. However, the initial diagnosis could have been in error and changed. This misdiagnosis is not captured by the BRFSS or ACBS. If the respondent informs the interviewer of the misdiagnosis, the respondent is not eligible for the ACBS, and the record is assigned disposition code 470.

480 Not recruited for call-back at BRFSS interview (excluded by state)
Definition: The BRFSS question that determines eligibility for the ACBS is "Have you ever been told by a doctor, nurse, or other health professional that (you have/the sample child has) asthma?" Respondents who answer "yes" are eligible for the ACBS. Eligible respondents are then asked for permission to call back. Those who agree should be called for the ACBS interview. However, if a respondent eligible to be called is not transferred from BRFSS to the ACBS and is never called, then the record is assigned disposition code 480.

490 Random child/adult selection: adult ineligible, child selected
Definition: If both the BRFSS respondent and the randomly selected child in the household have asthma and the BRFSS respondent agrees to the call-back interview, one or the other is randomly selected to be eligible for the call-back. If the child is selected, the adult is ineligible, and the adult record is assigned disposition code 490.

491 Random child/adult selection: child ineligible, adult selected
Definition: If both the BRFSS respondent and the randomly selected child in the household have asthma and the BRFSS respondent agrees to the call-back interview, one or the other is randomly selected to be eligible for the call-back. If the adult is selected, the child is ineligible, and the child record is assigned disposition code 491.