2011

Behavioral Risk Factor Surveillance System

Asthma Call-Back Survey

Summary Data Quality Report

National
Asthma
Control
Program

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2011 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.

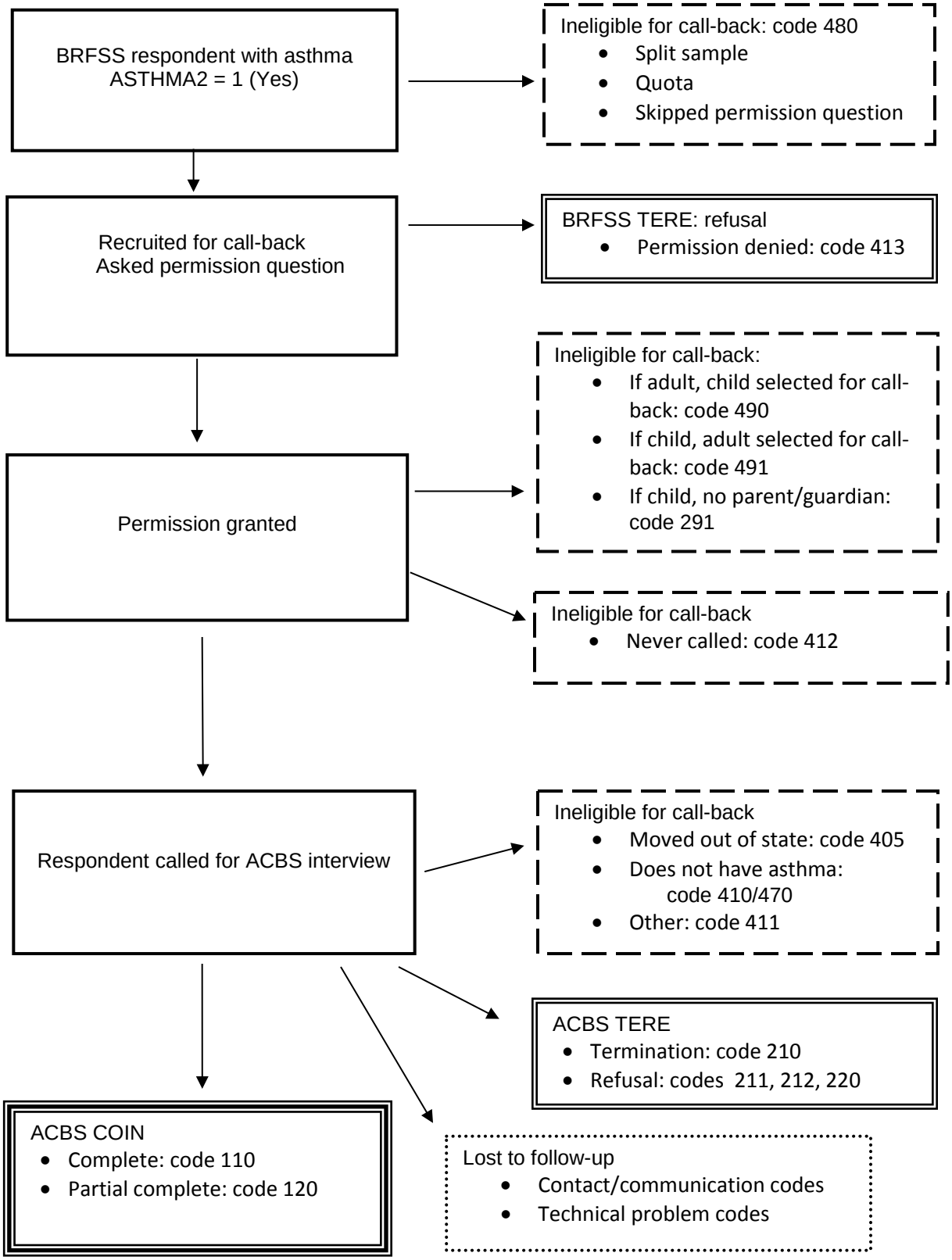
BRFSS respondents with asthma who are asked to participate in the ACBS but are later classified as ineligible include:

- 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:

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Table 3.2 ACBS 2011 Completed Interviews by State and Month: Child Land Line Sample

Table 1.1 ACBS 2011 Disposition Categories by State: Adult Land Line Sample

	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	746	77	10.3%	188	25.2%	481	64.5%	9	40	432	251	41	118	17	5
ARIZONA	827	69	8.3%	208	25.2%	550	66.5%	16	9	525	332	88	71	24	10
CALIFORNIA	2,199	343	15.6%	703	32.0%	1,153	52.4%	40	91	1,022	718	135	105	21	43
CONNECTICUT	796	43	5.4%	175	22.0%	578	72.6%	25	10	543	342	74	110	10	7
DISTRICT OF COLUMBIA	572	53	9.3%	144	25.2%	375	65.6%	7	6	362	221	58	66	11	6
FLORIDA*	1,297	172	13.3%	333	25.7%	792	61.1%	0	0	792	531	70	174	11	6
GEORGIA	1,100	120	10.9%	259	23.5%	721	65.5%	0	25	696	358	32	275	31	0
HAWAII	901	36	4.0%	296	32.9%	569	63.2%	26	10	533	383	10	106	9	25
ILLINOIS	560	20	3.6%	139	24.8%	401	71.6%	6	59	336	245	10	73	6	2
INDIANA	973	136	14.0%	235	24.2%	602	61.9%	15	0	587	427	31	105	13	11
IOWA	572	32	5.6%	161	28.1%	379	66.3%	8	3	368	264	15	77	5	7
KANSAS	1,900	64	3.4%	466	24.5%	1,370	72.1%	36	23	1,311	982	33	280	15	1
LOUISIANA	1,060	76	7.2%	226	21.3%	758	71.5%	29	12	717	385	36	228	51	17
MAINE*	589	26	4.4%	103	17.5%	460	78.1%	12	0	448	355	26	60	2	5
MARYLAND	1,065	67	6.3%	277	26.0%	721	67.7%	19	168	534	293	11	209	21	0
MASSACHUSETTS*	1,015	150	14.8%	196	19.3%	669	65.9%	20	23	626	317	11	268	29	1
MICHIGAN	1,259	49	3.9%	383	30.4%	827	65.7%	33	3	791	645	30	97	8	11
MISSISSIPPI	821	60	7.3%	182	22.2%	579	70.5%	11	37	531	356	21	105	20	29
MISSOURI	646	35	5.4%	211	32.7%	400	61.9%	15	7	378	282	9	72	8	7
MONTANA	1,089	89	8.2%	334	30.7%	666	61.2%	21	2	643	451	30	131	16	15
NEBRASKA	2,047	123	6.0%	580	28.3%	1,344	65.7%	37	4	1,303	937	61	252	28	25
NEVADA*	593	91	15.3%	168	28.3%	334	56.3%	0	43	291	175	4	102	8	2
NEW HAMPSHIRE*	723	31	4.3%	211	29.2%	481	66.5%	0	6	475	291	65	99	12	8
NEW JERSEY	1,709	217	12.7%	435	25.5%	1,057	61.8%	31	31	995	462	28	468	36	1
NEW MEXICO	1,022	69	6.8%	304	29.7%	649	63.5%	24	19	606	413	16	149	16	12
NEW YORK*	429	37	8.6%	85	19.8%	307	71.6%	8	0	299	190	25	76	6	2
NORTH CAROLINA*	647	62	9.6%	119	18.4%	466	72.0%	0	1	465	307	36	102	6	14
NORTH DAKOTA	450	39	8.7%	89	19.8%	322	71.6%	6	0	316	238	26	39	9	4
OHIO	1,099	106	9.6%	220	20.0%	773	70.3%	19	21	733	411	19	275	28	0
OKLAHOMA	1,043	33	3.2%	311	29.8%	699	67.0%	10	62	627	399	30	141	41	16
OREGON	741	66	8.9%	266	35.9%	409	55.2%	19	8	382	255	13	111	3	0
PENNSYLVANIA	1,080	87	8.1%	224	20.7%	769	71.2%	30	0	739	517	72	138	6	6
RHODE ISLAND	880	62	7.0%	224	25.5%	594	67.5%	31	9	554	338	77	120	17	2
TEXAS	1,641	149	9.1%	357	21.8%	1,135	69.2%	31	0	1,104	758	75	231	16	24
UTAH	1,315	73	5.6%	352	26.8%	890	67.7%	32	10	848	602	46	173	11	16
VERMONT	904	32	3.5%	229	25.3%	643	71.1%	18	9	616	424	76	83	25	8
WASHINGTON*	1,964	86	4.4%	269	13.7%	1,609	81.9%	95	269	1,245	945	31	181	61	27
WEST VIRGINIA	475	18	3.8%	95	20.0%	362	76.2%	8	4	350	240	18	67	6	19
WISCONSIN	549	92	16.8%	71	12.9%	386	70.3%	8	2	376	287	28	46	5	10
PUERTO RICO	650	8	1.2%	100	15.4%	542	83.4%	25	9	508	366	11	82	40	9
40 AREA TOTAL	**39,948**	**3,198**	**8.0%**	**9,928**	**24.9%**	**26,822**	**67.1%**	**780**	**1,035**	**25,007**	**16,693**	**1,528**	**5,665**	**708**	**413**

NOTES
* Florida did not inlcude children
* Maine only included respondents inversion 3 of the sample split
* 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.
* North Carolina only included respondents in version 1 of the sample split and did not include children.

Table 1.2 ACBS 2011 Disposition Categories by State: Child Land Line Sample

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*	182	48	26.4%	24	13.2%	110	60.4%	17	13	80	47	6	17	9	1
ARIZONA*	150	2	1.3%	32	21.3%	116	77.3%	18	17	81	48	18	11	2	2
CALIFORNIA	548	45	8.2%	149	27.2%	354	64.6%	57	32	265	134	65	45	4	9
CONNECTICUT	239	2	0.8%	37	15.5%	200	83.7%	31	11	158	86	20	45	7	0
DISTRICT OF COLUMBIA*	115	3	2.6%	27	23.5%	85	73.9%	18	10	57	32	9	12	4	0
HAWAII*	242	34	14.0%	48	19.8%	160	66.1%	39	9	112	73	3	29	1	6
ILLINOIS*	124	15	12.1%	17	13.7%	92	74.2%	22	9	61	49	1	9	2	0
INDIANA	214	39	18.2%	25	11.7%	150	70.1%	28	0	122	80	10	29	2	1
IOWA*	125	9	7.2%	23	18.4%	93	74.4%	14	1	78	56	3	18	0	1
KANSAS	440	39	8.9%	83	18.9%	318	72.3%	56	11	251	159	4	83	5	0
LOUISIANA*	276	44	15.9%	35	12.7%	197	71.4%	34	4	159	73	3	66	13	4
MAINE* **	101	4	4.0%	18	17.8%	79	78.2%	13	0	66	49	1	14	2	0
MARYLAND	275	4	1.5%	69	25.1%	202	73.5%	25	57	120	96	3	21	0	0
MASSACHUSETTS* **	154	1	0.6%	47	30.5%	106	68.8%	30	1	75	60	5	10	0	0
MICHIGAN	300	1	0.3%	83	27.7%	216	72.0%	29	2	185	119	15	32	0	1
MISSISSIPPI*	209	35	16.7%	22	10.5%	152	72.7%	28	35	89	55	1	29	4	0
MISSOURI*	137	12	8.8%	23	16.8%	102	74.5%	24	0	78	42	5	27	2	2
MONTANA*	215	19	8.8%	54	25.1%	142	66.0%	28	1	113	63	13	32	2	3
NEBRASKA	417	44	10.6%	66	15.8%	307	73.6%	51	0	256	175	4	61	8	8
NEW JERSEY	338	5	1.5%	98	29.0%	235	69.5%	55	7	173	130	6	36	1	0
NEW MEXICO	232	28	12.1%	39	16.8%	165	71.1%	31	11	123	81	3	27	11	1
NEW YORK* **	94	9	9.6%	9	9.6%	76	80.9%	16	0	60	31	9	19	1	0
NORTH DAKOTA*	80	0	0.0%	13	16.3%	67	83.8%	13	0	54	40	2	11	0	1
OHIO	192	5	2.6%	53	27.6%	134	69.8%	34	2	98	88	2	8	0	0
OKLAHOMA*	273	36	13.2%	27	9.9%	210	76.9%	37	18	155	74	11	47	19	4
OREGON*	133	2	1.5%	37	27.8%	94	70.7%	0	5	89	48	1	39	1	0
PENNSYLVANIA	252	21	8.3%	34	13.5%	197	78.2%	31	0	166	105	19	40	1	1
RHODE ISLAND*	251	0	0.0%	53	21.1%	198	78.9%	29	13	156	69	31	49	5	2
TEXAS	441	54	12.2%	41	9.3%	346	78.5%	48	0	298	172	30	77	15	4
UTAH	445	44	9.9%	95	21.3%	306	68.8%	53	0	253	184	13	51	3	2
VERMONT*	188	0	0.0%	33	17.6%	155	82.4%	31	9	115	73	19	17	6	0
WASHINGTON	387	1	0.3%	40	10.3%	346	89.4%	0	15	331	210	21	76	15	9
WEST VIRGINIA*	107	15	14.0%	11	10.3%	81	75.7%	16	2	63	41	1	18	2	1
WISCONSIN*	124	14	11.3%	21	16.9%	89	71.8%	23	1	65	43	6	15	0	1
34 AREA TOTAL	**8,000**	**634**	**7.9%**	**1,486**	**18.6%**	**5,880**	**73.5%**	**979**	**296**	**4,605**	**2,885**	**363**	**1,120**	**147**	**64**
14 WEIGHTED AREA TOTAL	**4,720**	**332**	**7.0%**	**912**	**19.3%**	**3,476**	**73.6%**	**529**	**148**	**2,799**	**1,819**	**215**	**631**	**72**	**36**

[1] Includes child without parent/guaridian

NOTES
* Child data for Alabama, Arizona, DC, Hawaii, Illinois, Iowa, Louisiana, Maine, Massachusetts, Mississippi, Missouri, Montana, New York, North Dakota, Oklahoma, Oregon, Rhode Island, Vermont, West Virginia, and Wisconsin are not included in the file because there were too few records (<75) to produce reliable weights.
** Maine only included respondents in version 3 of the sample split
** 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 2011 Response Rates by State: Adult Land Line Sample

STATE	Completion Rate	Cooperation Rate	Refusal Rate	CASRO Rate
ALABAMA	86.0%	52.3%	37.4%	41.0%
ARIZONA	79.1%	52.2%	41.1%	46.1%
CALIFORNIA	84.2%	46.1%	50.0%	42.8%
CONNECTICUT	82.2%	57.9%	35.1%	48.2%
DISTRICT OF COLUMBIA	79.2%	52.1%	40.5%	44.3%
FLORIDA	88.4%	56.2%	36.1%	47.5%
GEORGIA	91.8%	55.2%	30.5%	37.5%
HAWAII	97.5%	55.6%	38.4%	48.1%
ILLINOIS	96.1%	62.2%	31.5%	51.9%
INDIANA	93.2%	60.5%	32.9%	52.8%
IOWA	94.6%	59.7%	33.9%	50.8%
KANSAS	96.8%	66.3%	28.1%	55.3%
LOUISIANA	91.5%	59.4%	28.6%	42.1%
MAINE	93.2%	72.6%	23.7%	65.1%
MARYLAND	96.4%	50.4%	35.5%	36.1%
MASSACHUSETTS	96.7%	60.5%	25.2%	38.7%
MICHIGAN	95.6%	60.9%	35.6%	55.5%
MISSISSIPPI	94.4%	63.7%	30.1%	52.7%
MISSOURI	96.9%	56.2%	37.9%	48.6%
MONTANA	93.8%	55.3%	38.0%	47.1%
NEBRASKA	93.9%	59.3%	34.6%	50.6%
NEVADA	97.8%	50.4%	37.7%	38.4%
NEW HAMPSHIRE	81.7%	51.2%	40.9%	43.1%
NEW JERSEY	94.3%	50.0%	32.4%	32.4%
NEW MEXICO	96.3%	56.3%	35.8%	46.2%
NEW YORK	88.4%	62.3%	28.9%	49.8%
NORTH CAROLINA	89.5%	66.5%	27.4%	54.3%
NORTH DAKOTA	90.2%	66.9%	28.7%	59.5%
OHIO	95.6%	63.2%	25.1%	43.1%
OKLAHOMA	93.0%	53.9%	37.3%	43.6%
OREGON	95.2%	47.8%	43.1%	39.4%
PENNSYLVANIA	87.8%	62.7%	31.0%	54.1%
RHODE ISLAND	81.5%	52.7%	38.8%	43.6%
TEXAS	91.0%	62.7%	30.2%	53.0%
UTAH	92.9%	60.2%	33.7%	51.0%
VERMONT	84.8%	57.9%	36.5%	50.8%
WASHINGTON	96.8%	74.5%	20.3%	63.8%
WEST VIRGINIA	93.0%	67.2%	26.8%	57.0%
WISCONSIN	91.1%	74.4%	22.7%	65.9%
PUERTO RICO	97.1%	76.7%	18.6%	61.4%
40 AREA TOTAL	**91.6%**	**59.0%**	**33.3%**	**48.6%**
Median	**93.1%**	**59.3%**	**33.8%**	**48.4%**

Table 2.2 ACBS 2011 Response Rates by State: Child Land Line Sample

STATE	Completion Rate	Cooperation Rate	Refusal Rate	CASRO Rate
ALABAMA*	88.7%	61.0%	29.3%	45.9%
ARIZONA*	72.7%	49.0%	45.2%	43.4%
CALIFORNIA	67.3%	38.5%	54.2%	33.9%
CONNECTICUT	81.1%	59.7%	29.2%	44.1%
DISTRICT OF COLUMBIA*	78.1%	46.4%	42.9%	38.1%
HAWAII*	96.1%	58.9%	33.6%	48.1%
ILLINOIS*	98.0%	73.1%	23.1%	62.8%
INDIANA	88.9%	69.6%	24.0%	54.9%
IOWA*	94.9%	68.3%	26.1%	56.2%
KANSAS	97.6%	64.6%	26.1%	47.6%
LOUISIANA*	96.1%	65.8%	20.4%	39.2%
MAINE*	98.0%	72.1%	22.6%	58.3%
MARYLAND	97.0%	57.1%	38.1%	50.8%
MASSACHUSETTS*	92.3%	53.6%	42.6%	49.2%
MICHIGAN	88.8%	54.8%	39.4%	47.8%
MISSISSIPPI*	98.2%	70.5%	20.7%	49.6%
MISSOURI*	89.4%	60.0%	28.6%	42.9%
MONTANA*	82.9%	48.5%	41.2%	38.7%
NEBRASKA	97.8%	71.4%	22.5%	56.3%
NEW JERSEY	95.6%	55.6%	38.4%	48.0%
NEW MEXICO	96.4%	65.9%	26.2%	50.5%
NEW YORK*	77.5%	63.3%	26.1%	44.9%
NORTH DAKOTA*	95.2%	72.7%	22.8%	60.8%
OHIO	97.8%	61.5%	36.4%	58.3%
OKLAHOMA*	87.1%	66.1%	21.7%	42.3%
OREGON*	98.0%	55.8%	30.2%	38.1%
PENNSYLVANIA	84.7%	66.0%	26.7%	52.9%
RHODE ISLAND*	69.0%	44.8%	40.8%	33.5%
TEXAS	85.2%	70.8%	21.3%	51.6%
UTAH	93.4%	63.0%	31.3%	53.3%
VERMONT*	79.4%	58.4%	35.1%	49.3%
WASHINGTON	90.9%	76.1%	17.0%	58.6%
WEST VIRGINIA*	97.6%	77.4%	16.5%	56.5%
WISCONSIN*	87.8%	61.4%	31.9%	50.8%
34 AREA TOTAL	**88.8%**	**60.8%**	**30.9%**	**48.3%**
34 AREA MEDIAN	**91.6%**	**62.3%**	**28.9%**	**49.3%**
14 WEIGHTED AREA TOTAL	**89.4%**	**61.6%**	**31.0%**	**50.0%**
14 WEIGHTED AREA MEDIAN	**92.2%**	**63.8%**	**28.0%**	**51.2%**

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

Table 3.1 ACBS 2011 Completed Interviews by State and Month: Adult Land Line Sample

STATE	2011												2012			Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
ALABAMA	.	11	32	4	37	32	17	23	16	29	28	22	.	.	.	**251**
ARIZONA	.	40	27	50	45	25	19	24	15	31	19	24	13	.	.	**332**
CALIFORNIA	41	40	45	81	99	47	38	78	54	96	57	42	.	.	.	**718**
CONNECTICUT	28	41	49	36	21	15	18	29	9	30	23	35	8	.	.	**342**
DISTRICT OF COLUMBIA	.	12	30	26	14	19	16	22	4	20	21	28	9	.	.	**221**
FLORIDA	.	78	87	34	46	51	77	63	16	31	23	24	1	.	.	**531**
GEORGIA	.	33	26	15	19	25	62	58	48	33	36	3	.	.	.	**358**
HAWAII	18	27	30	28	36	20	56	53	31	28	43	13	.	.	.	**383**
ILLINOIS	.	.	24	18	.	.	22	34	22	24	17	60	24	.	.	**245**
INDIANA	.	58	52	46	42	54	17	32	18	41	32	34	1	.	.	**427**
IOWA	.	.	41	17	25	26	20	23	32	22	18	18	22	.	.	**264**
KANSAS	47	58	80	64	53	80	82	93	61	96	117	121	30	.	.	**982**
LOUISIANA	.	.	.	59	25	21	77	.	72	2	36	27	53	13	.	**385**
MAINE	.	39	33	21	40	40	29	24	39	24	36	29	1	.	.	**355**
MARYLAND	.	40	32	25	35	15	20	37	19	26	23	18	3	.	.	**293**
MASSACHUSETTS	.	29	47	22	28	20	30	18	23	30	37	32	1	.	.	**317**
MICHIGAN	.	33	39	42	29	91	67	140	30	47	32	61	33	1	.	**645**
MISSISSIPPI	.	55	47	47	50	26	16	21	33	27	18	16	.	.	.	**356**
MISSOURI	.	18	39	30	14	25	22	31	19	20	29	26	8	1	.	**282**
MONTANA	.	29	44	35	32	39	36	41	21	9	43	90	32	.	.	**451**
NEBRASKA	.	62	87	70	78	73	55	67	12	56	115	166	96	.	.	**937**
NEVADA	.	.	.	.	22	22	13	36	24	12	26	20	.	.	.	**175**
NEW HAMPSHIRE	.	13	27	32	40	25	12	28	15	34	27	27	10	1	.	**291**
NEW JERSEY	.	70	56	51	35	31	46	31	36	38	42	23	3	.	.	**462**
NEW MEXICO	.	.	48	41	36	43	27	45	61	7	33	31	38	3	.	**413**
NEW YORK	.	29	33	18	21	20	10	14	9	12	11	10	3	.	.	**190**
NORTH CAROLINA	.	.	16	7	24	29	21	29	59	46	24	18	30	4		**307**
NORTH DAKOTA	.	29	43	20	31	13	13	13	26	17	12	18	3	.	.	**238**
OHIO	.	63	46	6	51	37	10	53	32	37	48	27	1	.	.	**411**
OKLAHOMA	.	41	36	31	38	.	34	39	37	42	44	23	34	.	.	**399**
OREGON	.	.	55	20	29	19	23	22	13	24	27	23	.	.	.	**255**
PENNSYLVANIA	.	54	64	30	55	39	49	48	51	57	32	34	4	.	.	**517**
RHODE ISLAND	15	29	30	39	42	28	24	30	16	36	19	25	5	.	.	**338**
TEXAS	.	95	110	37	96	53	52	61	69	74	52	51	8	.	.	**758**
UTAH	.	.	45	87	80	24	55	57	52	51	60	42	44	5	.	**602**
VERMONT	11	48	39	39	26	27	36	41	14	65	32	38	8	.	.	**424**
WASHINGTON	.	134	110	60	75	47	67	119	41	91	78	95	28	.	.	**945**
WEST VIRGINIA	.	15	15	10	13	19	29	18	27	24	32	38	.	.	.	**240**
WISCONSIN	.	.	10	63	16	33	10	55	8	19	24	19	28	2	.	**287**
PUERTO RICO	.	.	.	.	.	15	54	66	96	8	34	38	55	.	.	**366**
40 AREA TOTAL	**160**	**1,323**	**1,674**	**1,361**	**1,498**	**1,268**	**1,381**	**1,716**	**1,280**	**1,416**	**1,460**	**1,489**	**637**	**30**	**0**	**16,693**

Table 3.2 ACBS 2011 Completed Interviews by State and Month: Child Land Line Sample

STATE	2011												2012			Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
ALABAMA*	.	3	6	1	4	8	4	3	2	4	7	5	.	.	.	**47**
ARIZONA*	.	7	5	5	3	7	5	6	.	3	4	3	.	.	.	**48**
CALIFORNIA	4	4	9	7	16	18	5	10	6	31	11	12	1	.	.	**134**
CONNECTICUT	9	11	18	4	5	4	5	6	3	4	9	7	1	.	.	**86**
DISTRICT OF COLUMBIA*	.	1	6	5	4	3	2	1	3	3	.	4	.	.	.	**32**
HAWAII*	4	5	4	6	5	5	6	13	6	9	8	2	.	.	.	**73**
ILLINOIS*	.	.	10	3	.	.	5	1	4	5	2	11	8	.	.	**49**
INDIANA**	.	14	19	7	7	4	3	5	5	7	6	3	.	.	.	**80**
IOWA*	.	.	9	2	5	7	3	10	3	4	5	5	3	.	.	**56**
KANSAS	11	7	9	6	16	11	9	17	13	14	15	26	5	.	.	**159**
LOUISIANA*	.	.	.	13	6	6	24	.	8	.	8	3	5	.	.	**73**
MAINE*	.	5	5	6	7	2	5	3	5	1	6	4	.	.	.	**49**
MARYLAND	.	14	4	5	10	3	9	12	8	11	13	7	.	.	.	**96**
MASSACHUSETTS*	.	9	6	4	2	.	10	2	4	4	10	9	.	.	.	**60**
MICHIGAN	.	4	5	10	8	9	20	18	13	7	3	13	7	2	.	**119**
MISSISSIPPI*	.	3	5	.	10	3	4	8	3	5	5	9	.	.	.	**55**
MISSOURI*	.	.	5	3	4	4	5	4	5	5	4	1	1	1	.	**42**
MONTANA*	.	3	7	8	5	5	3	3	4	.	9	13	3	.	.	**63**
NEBRASKA	.	18	12	20	10	14	15	17	1	1	22	32	13	.	.	**175**
NEW JERSEY	.	16	17	18	18	8	9	2	10	8	11	12	1	.	.	**130**
NEW MEXICO	.	.	6	7	12	5	4	6	15	1	7	6	8	4	.	**81**
NEW YORK*	.	4	4	3	6	1	.	3	1	4	5	.	.	.	.	**31**
NORTH DAKOTA*	.	1	5	3	1	5	4	1	4	4	7	5	.	.	.	**40**
OHIO	.	16	19	2	10	2	1	10	4	4	16	2	2	.	.	**88**
OKLAHOMA*	.	8	12	10	5	6	7	4	4	.	8	4	6	.	.	**74**
OREGON*	.	.	10	.	5	4	2	5	4	3	5	9	1	.	.	**48**
PENNSYLVANIA**	.	10	14	2	8	6	9	12	17	6	11	9	1	.	.	**105**
RHODE ISLAND*	5	4	6	12	6	5	11	4	3	1	4	8	.	.	.	**69**
TEXAS	.	14	29	6	20	9	12	17	20	16	15	13	1	.	.	**172**
UTAH	.	.	15	30	21	18	17	13	17	16	9	15	12	1	.	**184**
VERMONT*	3	7	9	5	6	8	4	7	3	8	2	9	2	.	.	**73**
WASHINGTON	.	53	27	6	12	18	10	13	1	29	15	20	6	.	.	**210**
WEST VIRGINIA*	.	2	3	3	4	4	2	2	4	7	3	7	.	.	.	**41**
WISCONSIN*	.	.	2	11	4	2	.	7	3	2	2	3	7	.	.	**43**
	.	.	.	.	.	.	.	.	.					.		
34 AREA TOTAL	**36**	**243**	**322**	**233**	**265**	**214**	**234**	**245**	**206**	**227**	**267**	**291**	**94**	**8**	**0**	**2,885**
14 WEIGHTED AREA TOTAL	**24**	**181**	**203**	**130**	**173**	**129**	**128**	**158**	**133**	**155**	**163**	**177**	**58**	**7**	**0**	**1,819**

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

** Two child records in Indiana and one child record in Pennsylvania could not be weighted or included in the public use file because the child's age increased above age 18 years between the BRFSS interview and the ACBS interview.

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.