

West Virginia Asthma State Plan Long-Term Outcome Indicators and Baseline Measures

Outcome 1: Decreased Asthma Morbidity

Indicator	Population	Data Source	Baseline		
			Year	Rate/%	95% CI
Asthma Episodes/Attacks <i>Had asthma episode/attack in the past 12 months</i>	Adults (age 18+)	BRFSS ACS	2007	55.9%	47.1-64.6
			2008	57.0%	48.9-65.2
			2007-2008	56.5%	50.5-62.4
	Children (age 0-17)	NSCH	2003	59.9%	51.7-68.2
	Children (age 0-17)	BRFSS ACS	2007	56.3%*	42.0-70.6
			2008	58.4%*	43.5-73.3
		2007-2008	57.4%*	27.2-67.6	
Youth (MS)	YTS	2007	48.9%	39.7-58.1	
Youth (HS)	YTS	2007	56.4%	48.4-64.4	
Asthma Symptoms <i>Symptoms 2 or more times per week in past 30 days</i>	Adults (age 18+)	BRFSS ACS	2007	52.6%	43.8-61.5
			2008	43.4%	35.2-51.7
			2007-2008	47.9%	41.9-53.9
Children (age 0-17)	BRFSS ACS	2007	22.5%	12.0-33.1	
		2008	22.6%*	9.6-35.6	
		2007-2008	22.6%	14.2-31.0	
Asthma Sleep Disturbances <i>Difficulty sleeping 3 or more nights in past 30 days</i>	Adults (age 18+)	BRFSS ACS	2007	30.5%	22.9-38.0
			2008	30.8%	23.2-38.5
			2007-2008	30.7%	25.3-36.0
	Children (age 0-17)	BRFSS ACS	2007	30.3%*	16.5-44.0
			2008	21.3%*	8.0-34.7
			2007-2008	25.7%	16.2-35.1
Quick-relief Medication Use <i>Medication use 1+ times in past 30 days</i>	Adults (age 18+)	BRFSS ACS	2007	**	
			2008	**	
			2007-2008		
	Children (age 0-17)	BRFSS ACS	2007	**	
			2008	**	
			2007-2008		
Asthma-related Missed School Days <i>YTS = 1+ missed days this school year BRFSS = 2 or more missed days in past 12 months</i>	Children (age 0-17)	BRFSS ACS	2007	49.8%*	34.7-65.0
			2008	47.8%*	31.9-63.7
			2007-2008	48.7%*	37.9-59.6
	Youth (MS)	YTS	2007	28.2%	19.5-36.9
	Youth (HS)	YTS	2007	29.4%	20.0-38.8

Asthma-related Missed Work Days/ Limited Activity Days <i>Limited 2 or more days in past 12 months</i>	Adults (age 18+)	BRFSS ACS	2007 2008 2007-2008	41.2% 36.6% 38.7%	32.0-50.4 28.3-44.9 32.7-45.0
	Adults (age 18+)	BRFSS ACS	2007 2008 2007-2008	75.1% 73.2% 74.1%	67.5-82.6 66.3-80.1 69.0-79.2
Asthma-related Activity Limitations <i>Limited usual activities a little to a lot in past 12 months</i>	Children (age 0-17)	BRFSS ACS	2007 2008 2007-2008	54.7%* 55.9%* 55.4%*	40.3-69.2 40.6-71.2 44.9-65.8

* Use caution in interpreting this estimate. It does not meet one or more of the reliability criteria.

** Formulas for calculating this value are still in development stage with CDC workgroup. Formula expected in the Summer of 2009.

Outcome 2: Decreased Asthma Acute Care Visits

Indicator	Population	Data Source	Baseline		
			Year	Rate/%	95% CI
Asthma Sick Care Visits <i>Visited Dr for urgent treatment in past 12 months</i>	Adults (age 18+)	BRFSS ACS	2007 2008 2007-2008	25.2% 23.5% 24.3%	18.9-31.6 16.2-30.8 19.5-29.2
	Children (age 0-17)	BRFSS ACS	2007 2008 2007-2008	39.5%* 31.3%* 35.2%	25.1-53.9 17.3-45.2 25.2-45.1
Asthma Emergency Room Visits <i>Visited ER for asthma treatment in past 12 months</i>	Adults (age 18+)	BRFSS ACS	2007 2008 2007-2008	17.6% 18.0% 17.8%	11.9-23.2 11.2-24.8 13.4-22.2
	Children (age 0-17)	BRFSS ACS	2007 2008 2007-2008	30.6%* 22.7%* 26.4%	17.0-44.2 9.4-35.9 17.0-35.9
Asthma Hospitalizations <i>UB Data = Hospitalizations with primary asthma Dx^a BRFSS, NSCH = Overnight stay in past 12 months</i>	Total	Uniform Billing Data	2007 2008	14.7 per 10,000	N/A
	Adults (age 18+)	BRFSS ACS	2007 2008 2007-2008	7.7% 6.5% 7.0%	3.6-11.8 3.3-9.6 4.5-9.6
	Children (age 0-17)	BRFSS ACS	2007 2008 2007-2008	12.3%* 7.4%* 9.7%	1.1-23.6 0.0-18.0 2.1-17.4
	Children (age 0-17)	NSCH	2003	4.0%*	1.3-6.7

* Use caution in interpreting this estimate. It does not meet one or more of the reliability criteria.

a. Primary diagnosis of ICD-9-CM 493. Excludes newborns.

Outcome 3: Decreased Asthma Mortality

Indicator	Population	Data Source	Baseline		
			Year	Rate	95% CI
Asthma Mortality <i>Deaths with primary cause of asthma (ICD-10 J45.J46)</i>	WV Residents	Vital Records	2006	1.5 per 100,000	1.1-2.2
			2007	2.0 per 100,000	1.4-2.8
			2008	0.9 per 100,000	0.5-1.4

Outcome 4: Decreased Asthma Health Disparities

Indicator	Population	Data Source	Baseline		
			Year	Rate	95% CI
Asthma Hospitalizations <i>Hospitalizations with primary asthma Dx (ICD-9-CM 493)</i>	Males	Uniform Billing Data	2007	10.4 per 10,000	N/A
	Females		2007	18.9 per 10,000	N/A
	<15	Uniform Billing Data	2007	20.9 per 10,000	N/A
	15-44		2007	7.3 per 10,000	N/A
	45-64		2007	15.5 per 10,000	N/A
	≥ 65		2007	25.1 per 10,000	N/A
	Asthma Mortality <i>Deaths with primary cause of asthma (ICD-10 J45,J46)</i>	Males	Vital Records	2000-2006	0.8 per 100,000
Females		2000-2008		0.8 per 100,000	0.6-1.0
		2000-2006		2.2 per 100,000	1.8-2.6
		2000-2008		2.1 per 100,000	1.8-2.4

Data Sources

ACS = Asthma Call-back Survey

AHM = Asthma History Module

BRFSS = Behavioral Risk Factor Survey

NSCH = National Survey of Children's Health

YTS = Youth Tobacco Survey