

CHAPTER 17: ASTHMA

Lifetime and Current Asthma among Adults in 2004 and 2005

Definitions **Lifetime Asthma:** Responding “Yes” to the following question: “Have you ever been told by a doctor, nurse, or other health professional that you had asthma?”

Current Asthma: Responding “Yes” to the lifetime asthma question and “Yes” to the following question: “Do you still have asthma?”

Prevalence

Lifetime Asthma

WV: 15.5% (95% CI: 14.1-16.9) in 2004; **13.4%** (95% CI: 12.0-14.8) in 2005.

US: 13.4% (95% CI: 13.1-13.6) in 2004; **12.6%** (95% CI: 12.3-12.8) in 2005.

West Virginia ranked 3rd among 52 BRFSS participants in 2004 and 16th among 53 BRFSS participants in 2005.

Current Asthma

WV: 10.1% (95% CI: 9.0-11.2) in 2004; **9.2%** (95% CI: 8.1-10.4) in 2005.

US: 8.1% (95% CI: 7.9-8.3) in 2004; **7.9%** (95% CI: 7.7-8.0) in 2005.

West Virginia ranked 2nd among 52 BRFSS participants in 2004 and 8th among 53 BRFSS participants in 2005.

Time Trends

Between 2000 and 2004 the prevalence of lifetime asthma significantly increased (from 11.7% to 15.5%). There was a slight reduction to 13.4% in 2005. The prevalence of current asthma increased only slightly between 2000 and 2005.

Gender

Lifetime Asthma

Men: 13.5% (95% CI: 11.4-15.7) in 2004; 10.4% (95% CI: 8.4-12.4) in 2005.

Women: 17.2% (95% CI: 15.4-19.1) in 2004; 16.2% (95% CI: 14.3-18.1) in 2005.

Women had a significantly higher prevalence of lifetime asthma than men in 2005.

Current Asthma

Men: 7.5% (95% CI: 5.9-9.1) in 2004; 5.6% (95% CI: 4.1-7.1) in 2005.

Women: 12.5% (95% CI: 10.9-14.2) in 2004; 12.6% (95% CI: 10.9-14.3) in 2005.

In both years, women were significantly more likely than men to have asthma.

Current Asthma

Age

Generally the current asthma prevalence did not differ significantly by age. In 2004, the prevalence of current asthma was highest among adults aged 55 to 64 (12.5%), whereas in 2005 the prevalence was highest among those aged 18 to 24 (15.0%).

Current Asthma **Education and Household Income**

In 2004 and 2005, the prevalence of current asthma was significantly higher among adults without a high school diploma and among those with a household income of less than \$15,000. In fact, the poorest adults were about three times more likely to have asthma than the wealthiest adults.

WV HEALTHY PEOPLE 2010 OBJECTIVES

Objective 24.5

Reduce the prevalence of current asthma among adults aged 18 years and older to 7.7% or lower. (Revised 2003) (Baseline: 8.5% in 2000; Current: 9.2% in 2005)

Table 17.1 Lifetime asthma by demographic characteristics: WVBRFSS, 2004

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,315	13.5	11.4-15.7	2,118	17.2	15.4-19.1	3,433	15.5	14.1-16.9
Age									
18-24	75	*14.6	5.9-23.3	115	16.1	8.7-23.5	190	15.3	9.6-21.0
25-34	180	15.6	9.8-21.3	282	18.4	13.5-23.4	462	17.0	13.2-20.8
35-44	236	13.8	9.1-18.5	362	18.1	13.7-22.5	598	16.0	12.8-19.2
45-54	297	13.4	9.3-17.6	400	14.6	10.8-18.3	697	14.0	11.2-16.8
55-64	255	11.5	7.3-15.7	379	20.3	15.6-25.0	634	16.0	12.8-19.2
65+	270	12.6	8.4-16.8	576	16.8	13.3-20.3	846	15.1	12.4-17.8
Education									
Less than H.S.	225	17.3	11.3-23.3	402	24.0	19.2-28.7	627	21.0	17.3-24.8
H.S. or G.E.D.	524	13.3	10.1-16.6	797	16.7	13.6-19.8	1,321	15.0	12.7-17.3
Some Post-H.S.	259	13.6	8.7-18.5	470	15.0	11.2-18.7	729	14.3	11.3-17.4
College Graduate	305	11.1	7.2-15.1	446	14.5	10.9-18.2	751	12.9	10.2-15.6
Income									
Less than \$15,000	165	16.1	9.2-22.9	464	30.3	25.4-35.1	629	24.8	20.8-28.9
\$15,000- 24,999	261	17.1	11.9-22.3	404	15.7	11.8-19.6	665	16.3	13.1-19.6
\$25,000- 34,999	165	16.2	10.0-22.4	252	16.4	11.2-21.5	417	16.3	12.3-20.3
\$35,000- 49,999	215	11.5	6.3-16.7	304	11.7	7.5-15.8	519	11.6	8.3-14.9
\$50,000- 74,999	214	10.0	5.0-15.0	230	15.5	10.1-20.9	444	12.4	8.7-16.1
\$75,000+	187	11.9	7.2-16.7	189	10.7	6.1-15.2	376	11.4	8.0-14.7

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 9.

Table 17.2 Lifetime asthma by demographic characteristics: WVBRFSS, 2005

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,357	10.4	8.4-12.4	2,188	16.2	14.3-18.1	3,545	13.4	12.0-14.8
Age									
18-24	68	18.2	8.2-28.2	102	29.7	19.8-39.5	170	23.8	16.7-30.9
25-34	182	8.4	4.0-12.8	282	12.0	8.0-16.1	464	10.2	7.2-13.2
35-44	226	8.9	4.9-13.0	351	14.7	10.6-18.8	577	11.9	9.0-14.8
45-54	285	6.1	3.4-8.9	458	16.5	12.8-20.1	743	11.3	9.0-13.7
55-64	276	10.8	6.8-14.8	365	15.7	11.5-19.8	641	13.3	10.4-16.1
65+	318	11.5	7.6-15.4	621	13.4	10.5-16.3	939	12.6	10.3-14.9
Education									
Less than H.S.	249	15.8	10.5-21.2	380	18.9	14.3-23.6	629	17.3	13.8-20.9
H.S. or G.E.D.	555	7.8	4.9-10.6	867	15.6	12.8-18.5	1,422	11.8	9.7-13.8
Some Post-H.S.	248	10.7	6.1-15.4	503	17.8	13.3-22.3	751	14.9	11.6-18.2
College Graduate	304	10.2	5.8-14.6	435	13.0	9.5-16.4	739	11.6	8.8-14.4
Income									
Less than \$15,000	166	17.7	9.8-25.6	435	20.7	16.0-25.3	601	19.5	15.4-23.7
\$15,000- 24,999	269	12.6	7.4-17.7	461	19.8	15.4-24.1	730	16.4	13.0-19.7
\$25,000- 34,999	213	9.6	5.3-13.8	253	14.5	9.1-19.8	466	11.8	8.4-15.2
\$35,000- 49,999	207	7.7	3.9-11.4	265	13.3	8.0-18.6	472	10.4	7.1-13.6
\$50,000- 74,999	209	8.8	4.4-13.2	262	14.0	9.1-18.9	471	11.3	8.0-14.6
\$75,000+	175	*6.9	1.5-12.3	211	14.1	7.9-20.3	386	10.3	6.2-14.4

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 9.

Table 17.3 Current asthma by demographic characteristics: WVBRFSS, 2004

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,312	7.5	5.9-9.1	2,114	12.5	10.9-14.2	3,426	10.1	9.0-11.2
Age									
18-24	74	* 4.3	0.0-9.1	115	9.7	4.0-15.4	189	6.9	3.2-10.7
25-34	180	* 6.4	2.3-10.6	282	13.0	8.6-17.4	462	9.7	6.7-12.8
35-44	235	8.4	4.7-12.1	361	12.9	9.1-16.7	596	10.7	8.0-13.4
45-54	297	8.5	4.9-12.0	398	11.5	8.1-14.8	695	10.0	7.6-12.5
55-64	255	8.2	4.5-11.9	379	16.6	12.3-21.0	634	12.5	9.6-15.4
65+	269	8.2	4.8-11.5	575	11.8	8.7-14.8	844	10.3	8.0-12.6
Education									
Less than H.S.	225	10.7	6.3-15.2	401	20.8	16.3-25.3	626	16.4	13.1-19.6
H.S. or G.E.D.	523	8.1	5.4-10.7	795	12.4	9.6-15.2	1,318	10.2	8.3-12.1
Some Post-H.S.	258	7.0	3.9-10.2	469	9.0	6.3-11.7	727	8.1	6.0-10.2
College Graduate	304	* 4.3	1.6-6.9	446	9.2	6.2-12.2	750	6.8	4.8-8.8
Income									
Less than \$15,000	165	13.9	7.3-20.5	463	25.6	21.0-30.3	628	21.2	17.3-25.0
\$15,000- 24,999	260	14.0	9.0-19.0	404	12.1	8.6-15.5	664	13.0	10.0-16.0
\$25,000- 34,999	165	6.2	2.8-9.7	252	11.5	7.1-15.9	417	9.0	6.1-11.8
\$35,000- 49,999	215	* 5.1	2.1-8.1	303	6.9	3.5-10.3	518	6.0	3.7-8.3
\$50,000- 74,999	213	* 2.6	0.6-4.6	229	7.3	3.7-10.9	442	4.7	2.7-6.6
\$75,000+	186	* 3.3	0.7-5.9	189	7.6	3.7-11.5	375	5.2	2.9-7.5

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 9.

Table 17.4 Current asthma by demographic characteristics: WVBRFSS, 2005

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,353	5.6	4.1-7.1	2,180	12.6	10.9-14.3	3,533	9.2	8.1-10.4
Age									
18-24	68	* 8.7	1.2-16.2	101	21.6	12.6-30.6	169	15.0	9.0-20.9
25-34	181	* 2.6	0.2-5.0	282	9.2	5.6-12.8	463	5.9	3.7-8.1
35-44	226	* 5.6	2.2-9.1	347	12.0	8.2-15.8	573	8.9	6.3-11.4
45-54	282	* 3.1	1.3-5.0	456	13.0	9.7-16.3	738	8.1	6.2-10.0
55-64	276	7.4	4.2-10.7	364	12.2	8.5-15.9	640	9.9	7.4-12.3
65+	318	6.5	3.6-9.5	621	10.9	8.2-13.6	939	9.1	7.1-11.1
Education									
Less than H.S.	247	10.2	5.9-14.5	379	15.6	11.2-19.9	626	12.8	9.7-15.9
H.S. or G.E.D.	553	2.9	1.3-4.5	862	12.1	9.5-14.7	1,415	7.5	6.0-9.1
Some Post-H.S.	248	* 6.0	2.3-9.7	502	13.7	9.8-17.7	750	10.5	7.7-13.4
College Graduate	304	6.3	2.6-10.0	434	9.8	6.8-12.9	738	8.0	5.6-10.4
Income									
Less than \$15,000	165	14.4	6.8-22.0	434	18.3	13.8-22.7	599	16.8	12.8-20.8
\$15,000- 24,999	268	7.8	3.4-12.1	459	15.7	11.6-19.7	727	11.9	8.9-14.9
\$25,000- 34,999	212	* 4.2	1.6-6.7	252	11.3	6.6-16.0	464	7.4	4.8-10.0
\$35,000- 49,999	207	5.7	2.4-9.0	264	9.3	4.6-14.1	471	7.4	4.5-10.3
\$50,000- 74,999	209	* 3.5	0.9-6.1	260	10.0	5.5-14.4	469	6.6	4.0-9.1
\$75,000+	175	* 2.9	0.1-5.6	210	8.8	4.4-13.2	385	5.6	3.1-8.2

* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 9.

Figure 17.1 Lifetime and current asthma by year: WVBRFSS, 2000-2005

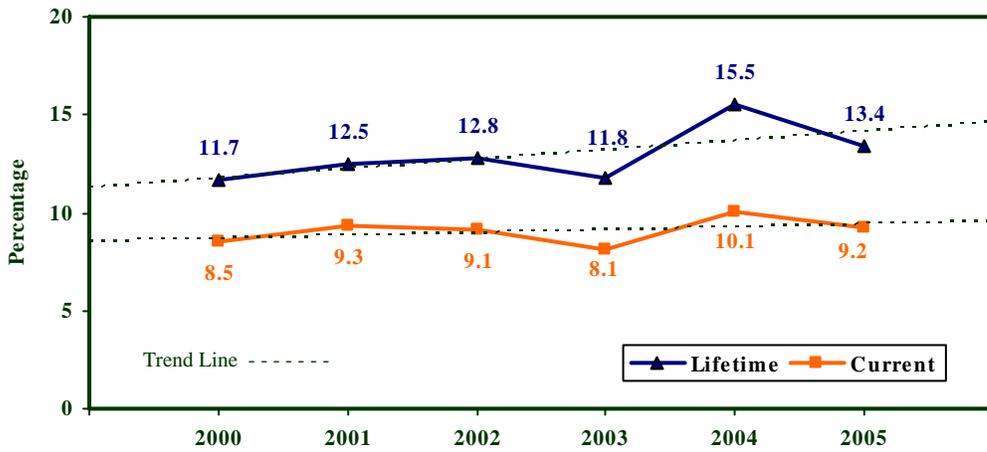
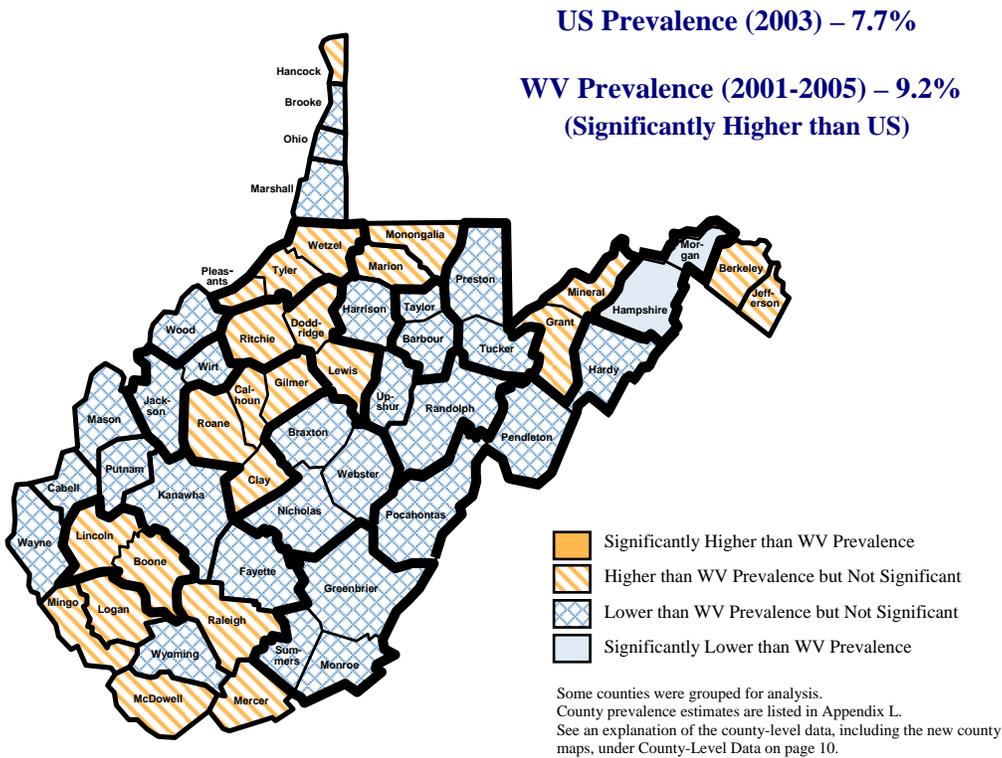


Figure 17.2 Current asthma by county: WVBRFSS, 2001-2005



Lifetime and Current Asthma among Children in 2005

For the first time in 2005, the West Virginia Behavioral Risk Factor Survey collected data on children age 17 and younger. BRFSS adult respondents were asked demographic, asthma, and immunization questions about a randomly selected child in the household. The data have been weighted to be representative of children in West Virginia.

Table 17.5 Lifetime and current asthma among children: WVBRFSS, 2005

	Lifetime Asthma			Current Asthma		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,002	12.6	10.3-15.0	999	8.5	6.6-10.5
MALES	493	14.8	11.2-18.3	492	9.3	6.5-12.2
FEMALES	505	10.5	7.5-13.5	503	7.7	5.1-10.4

Additional Information on Asthma among Adults in 2005

Table 17.6 Asthma symptoms, medication use, and health care visits among adults with current asthma: WVBRFSS, 2005

ADULTS WITH CURRENT ASTHMA WHO...	# Resp.	%	95% CI
SYMPTOMS			
Had an asthma attack in the past 12 months	322	49.4	42.7-56.0
Experienced asthma symptoms every day in the past 30 days	305	26.0	19.4-32.6
Had difficulty sleeping due to asthma on 1 or more days in past 30 days	225	56.9	48.9-65.0
Were limited in activities because of asthma on 1 or more days in the past 12 months	305	27.6	21.4-33.8
MEDICATION USE			
Took medication to prevent an asthma attack on 25 to 30 days in the past 30 days	320	36.9	30.8-43.1
Took medication during an asthma attack 30 or more times in the past 30 days	315	13.3	8.9-17.6
HEALTH CARE VISITS			
Visited a doctor for a routine asthma checkup in the past 12 months	322	56.6	49.9-63.3
Visited a doctor for worsening asthma symptoms in the past 12 months	315	26.5	21.0-32.1
Visited an emergency room or urgent care center for asthma in the past 12 months	320	18.9	13.9-23.9

QUICK STATS

- 36.2% of adults with lifetime asthma were first diagnosed with asthma at the age of 10 or younger.

Illness Caused by Environmental Air in 2004

Definitions

Indoor Air Illness: Responding “Yes” to the following question: “Things like dust, mold, and chemicals inside the home or office can cause poor indoor air quality. In the past 12 months have you had an illness or symptom that you think was caused by something in the air inside a home, office, or other building?”

Outdoor Air Illness: Responding “Yes” to the following question: “Things like smog, automobile exhaust, and chemicals can cause outdoor air pollution. In the past 12 months have you had an illness or symptom that you think was caused by pollution in the air outdoors? This question does not refer to natural agents like pollen or dust in outdoor air.”

Illnesses or symptoms experienced in the past 12 months that were caused by something encountered in the air over 12 months ago are counted as “yes” responses.

Prevalence

Indoor Air Illness

WV: 19.3% (95% CI: 17.7-20.9). **US: 21.8%** (95% CI: 21.5-22.1)
West Virginia ranked 43rd among 52 BRFSS participants in 2004.

Outdoor Air Illness

WV: 12.9% (95% CI: 11.6-14.2). **US: 13.1%** (95% CI: 12.9-13.4)
West Virginia ranked 19th among 52 BRFSS participants in 2004.

Gender

Indoor Air Illness

Men: 15.9% (95% CI: 13.6-18.2). **Women:** 22.4% (95% CI: 20.4-24.5).

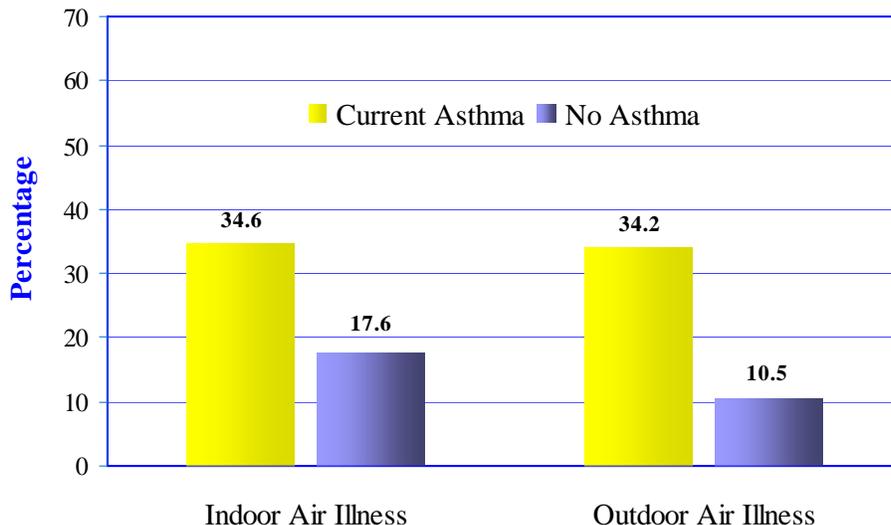
Women were significantly more likely than men to report having an illness in the past 12 months that was caused by poor indoor air.

Outdoor Air Illness

Men: 11.5% (95% CI: 9.7-13.4). **Women:** 14.1% (95% CI: 12.4-15.9).

There was no gender difference in the prevalence of outdoor air illnesses.

Figure 17.3 Indoor and outdoor air illnesses by asthma status: WVBRFSS, 2004



Adults with asthma were significantly more likely to report illnesses caused by poor indoor and outdoor air than adults without asthma.