

CHAPTER 13: CARDIOVASCULAR DISEASE

Heart Attack, Angina, and Stroke in 2004 and 2005

Definition

In 2005, responding “Yes” to the following: “Has a doctor, nurse, or other health professional ever told you that you had any of the following? For each, tell me ‘yes,’ ‘no,’ or you’re ‘not sure’.” The follow-up questions were “. . . ever told you had a heart attack, also called a myocardial infraction?” “. . . ever told you had angina or coronary heart disease?” “. . . ever told you had a stroke?” (In 2004 and earlier years, the questions were similar but not identical.)

Prevalence

Heart Attack

WV: 6.8% (95% CI: 5.9-7.7) in 2004, 7.0% (95% CI: 6.1-7.9) in 2005.

US: US prevalence is not available in 2004, 4.1% (95% CI: 4.0-4.2) in 2005. West Virginia ranked 1st highest among 8 BRFSS participants in 2004 and 1st highest among 53 BRFSS participants in 2005.

Angina

WV: 7.6% (95% CI: 6.6-8.5) in 2004, 8.2% (95% CI: 7.3-9.2) in 2005.

US: US prevalence is not available in 2004, 4.5% (95% CI: 4.4-4.6) in 2005. West Virginia ranked 1st highest among 8 BRFSS participants in 2004 and 2nd highest among 53 BRFSS participants in 2005.

Stroke

WV: 3.1% (95% CI: 2.5-3.7) in 2004, 3.4% (95% CI: 2.7-4.0) in 2005.

US: US prevalence is not available in 2004, 2.6% (95% CI: 2.5-2.7) in 2005. West Virginia ranked 1st highest among 8 BRFSS participants in 2004 and 5th highest among 53 BRFSS participants in 2005.

Gender

Heart attack differences by gender

Men: 8.6% (95% CI: 7.0-10.2) in 2004, 8.5% (95% CI: 7.0-10.0) in 2005.

Women: 5.1% (95% CI: 4.1-6.1) in 2004, 5.5% (95% CI: 4.5-6.6) in 2005.

Men had a significantly higher incidence of heart attack than women.

Angina differences by gender

Men: 7.7% (95% CI: 6.3-9.2) in 2004, 7.9% (95% CI: 6.4-9.3) in 2005.

Women: 7.4% (95% CI: 6.2-8.5) in 2004, 8.6% (95% CI: 7.3-9.8) in 2005.

There were no significant differences in angina rates between men and women.

Stroke differences by gender

Men: 2.8% (95% CI: 1.9-3.6) in 2004, 2.6% (95% CI: 1.7-3.5) in 2005.

Women: 3.4% (95% CI: 2.6-4.2) in 2004, 4.1% (95% CI: 3.2-4.9) in 2005.

Women experienced stroke slightly more often than men.

Age, Education, & Household Income

Those aged 65 and older experienced heart attack, angina, and stroke significantly more often than most younger age groups. Adults with less than a high school education carried a significantly higher risk of heart attack, angina, and stroke than those with more education. Heart attack, angina, and stroke were significantly more common among the lowest income groups than among those with the highest household incomes.

Table 13.1 Heart attack, angina, or stroke by demographic characteristics: WVBRFSS, 2004

Characteristic	Heart Attack or Myocardial Infarction			Angina or Coronary Heart Disease			Stroke		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,391	6.8	5.9-7.7	3,381	7.6	6.6-8.5	3,387	3.1	2.5-3.7
Sex									
Males	1,302	8.6	7.0-10.2	1,298	7.7	6.3-9.2	1,300	2.8	1.9-3.6
Females	2,089	5.1	4.1-6.1	2,083	7.4	6.2-8.5	2,087	3.4	2.6-4.2
Age									
18-44	1,233	1.9	1.0-2.9	1,231	1.6	0.9-2.3	1,231	* 0.5	0.1-0.9
45-54	687	5.0	3.2-6.7	688	6.7	4.6-8.7	689	2.3	1.2-3.5
55-64	627	10.9	8.2-13.6	623	11.9	9.1-14.7	624	4.9	3.2-6.7
65+	838	17.0	14.1-19.8	833	19.2	16.2-22.1	837	8.5	6.5-10.6
Education									
Less than H.S.	615	14.4	11.5-17.4	606	14.1	11.2-17.0	616	7.0	4.9-9.1
H.S. or G.E.D.	1,307	6.4	4.9-8.0	1,306	7.1	5.6-8.5	1,302	2.6	1.8-3.5
Some Post-H.S.	719	4.2	2.8-5.7	719	4.9	3.4-6.5	720	2.2	1.3-3.1
College Graduate	746	3.8	2.4-5.2	746	5.8	4.1-7.5	745	1.5	0.7-2.3
Income									
Less than \$15,000	621	11.8	8.7-14.8	614	12.6	9.9-15.4	617	5.5	3.8-7.2
\$15,000- 24,999	660	8.9	6.5-11.3	659	10.1	7.6-12.6	660	4.4	2.8-6.1
\$25,000- 34,999	409	7.1	4.4-9.8	410	6.1	3.7-8.6	410	3.5	1.5-5.5
\$35,000- 49,999	515	4.5	2.6-6.3	513	6.1	3.9-8.3	514	* 1.9	0.8-3.0
\$50,000- 74,999	440	2.8	1.4-4.2	439	5.8	3.6-8.0	440	* 1.3	0.4-2.3
\$75,000+	374	* 2.5	1.0-4.1	373	3.3	1.4-5.2	373	* 1.0	0.2-1.8

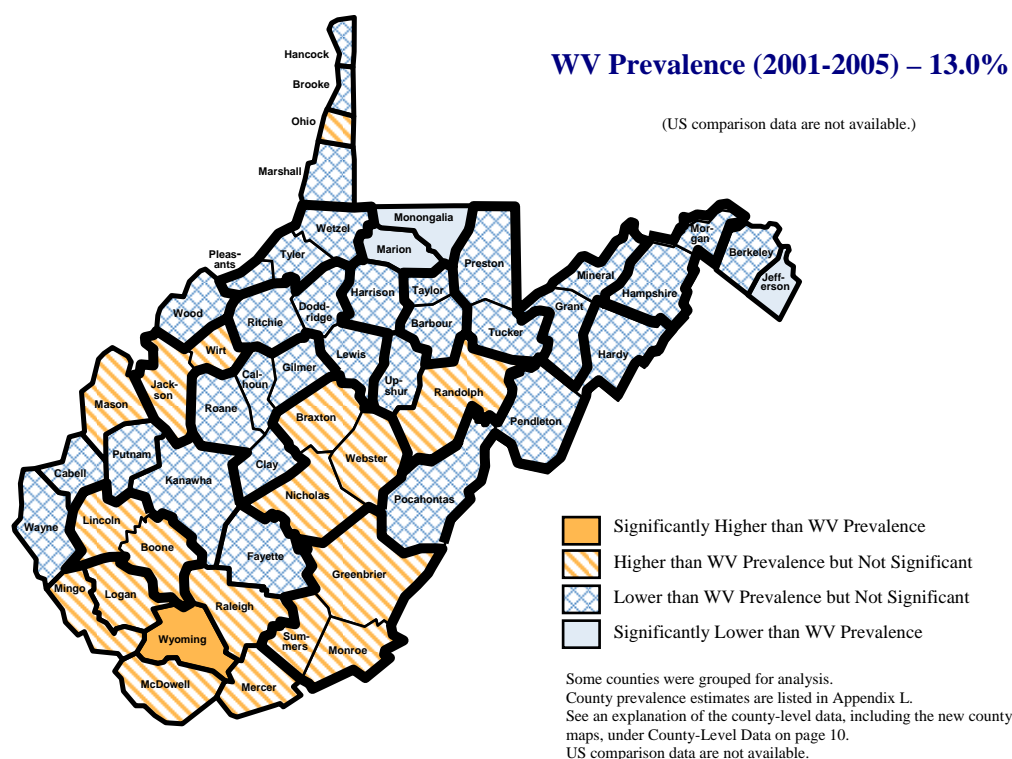
* Use caution when interpreting and reporting this estimate. See discussion of unstable estimates on page 9.

Table 13.2 Heart attack, angina, or stroke by demographic characteristics: WVBRFSS, 2005

Characteristic	Heart Attack or Myocardial Infarction			Angina or Coronary Heart Disease			Stroke		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,544	7.0	6.1-7.9	3,528	8.2	7.3-9.2	3,544	3.4	2.7-4.0
Sex									
Males	1,356	8.5	7.0-10.0	1,349	7.9	6.4-9.3	1,358	2.6	1.7-3.5
Females	2,188	5.5	4.5-6.6	2,179	8.6	7.3-9.8	2,186	4.1	3.2-4.9
Age									
18-44	1,210	1.3	0.6-2.0	1,208	2.3	1.4-3.2	1,210	* 0.6	0.2-1.0
45-54	745	6.1	4.2-8.0	745	6.0	4.2-7.9	741	3.0	1.7-4.4
55-64	640	7.5	5.3-9.8	636	13.3	10.4-16.3	641	4.7	2.9-6.5
65+	938	20.2	17.1-23.2	928	20.2	17.3-23.1	941	9.0	6.8-11.2
Education									
Less than H.S.	631	12.0	9.2-14.8	621	11.7	9.0-14.4	631	7.1	4.8-9.3
H.S. or G.E.D.	1,422	7.1	5.7-8.5	1,416	8.8	7.2-10.3	1,424	2.7	1.9-3.5
Some Post-H.S.	750	6.4	4.5-8.4	749	8.7	6.6-10.8	747	3.5	2.0-4.9
College Graduate	738	2.9	1.7-4.1	738	3.7	2.4-5.1	738	* 1.3	0.5-2.2
Income									
Less than \$15,000	597	11.2	8.4-13.9	592	14.8	11.8-17.9	601	7.6	5.1-10.0
\$15,000- 24,999	730	10.2	7.7-12.7	729	11.6	9.0-14.1	730	5.8	3.8-7.8
\$25,000- 34,999	467	9.1	6.3-11.9	467	8.4	5.6-11.1	468	3.6	1.9-5.3
\$35,000- 49,999	472	4.2	2.3-6.1	470	5.5	3.3-7.6	471	* 1.3	0.3-2.2
\$50,000- 74,999	471	2.5	1.0-3.9	471	3.1	1.7-4.5	469	* 0.4	0.0-0.8
\$75,000+	385	* 2.4	0.9-3.9	386	2.8	1.2-4.5	385	* 0.4	0.0-1.1

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

Figure 13.1 Adults diagnosed with heart attack, angina, or stroke by county: WVBRFSS, 2001-2005



Other Cardiovascular Disease Issues

Table 13.3 Heart attack and stroke before age 55: WVBRFSS, 2004

Characteristics	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Respondents who had their first heart attack before the age of 55 ^a	128	53.2	43.6-62.9	112	*50.1	39.7-60.5	240	52.1	44.8-59.3
Respondents who had their first stroke before the age of 55 ^b	44	*51.7	35.8-67.6	80	*35.5	23.7-47.3	124	42.7	32.9-52.5

a. Among respondents who have ever been told by a doctor that they had a heart attack.

b. Among respondents who have ever been told by a doctor that they had a stroke.

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

Table 13.4 No rehabilitation following a heart attack or stroke: WVBRFSS, 2004 and 2005

Characteristics	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
In 2004									
No rehabilitation after leaving hospital following a heart attack or stroke	159	71.9	64.1-79.8	188	78.4	72.0-84.9	347	74.8	69.5-80.0
In 2005 **									
No rehabilitation after leaving hospital following a heart attack or stroke	169	75.7	68.9-82.5	210	79.7	74.0-85.5	379	77.6	73.1-82.1

** The 2005 results are not directly comparable to the earlier year data due to a change in the survey questions.

Aspirin Therapy in 2004 and 2005

Table 13.5 Daily or alternate-day aspirin therapy among adults aged 35 and older by demographic characteristics: WVBRFSS, 2004

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,052	41.5	38.2-44.7	1,694	32.1	29.7-34.6	2,746	36.5	34.5-38.5
Age									
35-44	236	20.0	14.4-25.5	355	10.0	6.5-13.4	591	14.9	11.6-18.2
45-54	294	34.6	28.7-40.5	396	26.9	22.0-31.7	690	30.6	26.8-34.5
55-64	252	52.7	46.0-59.3	375	39.7	34.3-45.1	627	46.0	41.7-50.3
65+	270	63.6	57.4-69.8	568	49.4	44.9-53.9	838	55.2	51.5-58.9
Education									
Less than H.S.	197	38.9	31.6-46.3	356	38.7	33.2-44.2	553	38.8	34.4-43.2
H.S. or G.E.D.	419	41.9	36.7-47.1	662	32.4	28.5-36.3	1,081	37.0	33.8-40.2
Some Post-H.S.	184	42.0	34.4-49.6	334	29.5	24.2-34.8	518	35.0	30.5-39.4
College Graduate	250	42.3	35.7-48.9	340	27.0	22.0-32.1	590	34.8	30.6-39.0
Income									
Less than \$15,000	135	37.8	28.5-47.0	377	39.8	34.3-45.2	512	39.0	34.3-43.8
\$15,000- 24,999	213	47.0	39.6-54.4	316	37.1	31.3-42.9	529	41.9	37.2-46.6
\$25,000- 34,999	131	37.5	28.5-46.5	206	34.2	26.9-41.4	337	35.7	30.0-41.4
\$35,000- 49,999	159	37.0	29.0-45.0	235	21.1	15.8-26.3	394	28.6	23.8-33.3
\$50,000- 74,999	167	40.7	32.7-48.6	178	28.3	21.0-35.6	345	35.1	29.6-40.6
\$75,000+	161	42.2	34.2-50.3	154	24.6	17.4-31.7	315	35.0	29.3-40.6

Table 13.6 Daily or alternate-day aspirin therapy among adults aged 35 and older by demographic characteristics: WVBRFSS, 2005

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,095	41.0	37.9-44.2	1,779	35.4	33.0-37.8	2,874	38.1	36.1-40.0
Age									
35-44	224	20.3	14.7-25.9	347	12.9	8.9-16.9	571	16.6	13.1-20.0
45-54	282	38.0	31.9-44.2	454	26.7	22.2-31.2	736	32.3	28.5-36.1
55-64	274	48.6	42.1-55.1	362	43.4	37.9-48.9	636	46.0	41.7-50.2
65+	315	59.1	53.3-65.0	616	54.3	50.0-58.6	931	56.3	52.8-59.8
Education									
Less than H.S.	209	44.4	36.9-52.0	335	41.2	35.3-47.1	544	42.8	38.1-47.6
H.S. or G.E.D.	456	39.7	34.9-44.6	738	34.0	30.3-37.7	1,194	36.7	33.7-39.8
Some Post-H.S.	193	41.2	33.9-48.6	384	35.5	30.2-40.8	577	37.8	33.5-42.1
College Graduate	236	40.6	33.9-47.2	319	32.6	27.1-38.1	555	36.7	32.4-41.0
Income									
Less than \$15,000	148	40.2	31.2-49.2	378	41.0	35.6-46.5	526	40.7	35.9-45.5
\$15,000- 24,999	222	48.5	41.3-55.7	377	39.9	34.3-45.5	599	43.9	39.4-48.4
\$25,000- 34,999	166	49.8	41.5-58.1	203	30.9	23.8-38.0	369	41.1	35.5-46.7
\$35,000- 49,999	164	40.2	32.1-48.3	209	35.1	28.2-42.0	373	37.8	32.4-43.1
\$50,000- 74,999	165	30.7	23.5-38.0	198	23.4	17.4-29.4	363	27.3	22.5-32.0
\$75,000+	150	32.7	24.7-40.6	163	31.4	24.0-38.9	313	32.1	26.6-37.6

Cardiovascular Disease Prevention Activities in 2004

Table 13.7 Adults who are being more physically active (in order to lower their risk of heart disease or stroke) and health professional advice on the same: WVBRFSS, 2004

Characteristic	Adults who are being more physically active			Adults advised by a health professional in the past 12 months to be more physically active		
	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,388	71.4	69.7-73.2	3,392	36.6	34.8-38.5
Sex						
Males	1,298	71.6	68.9-74.4	1,302	32.0	29.2-34.8
Females	2,090	71.2	69.1-73.4	2,090	40.9	38.5-43.3
Age						
18-24	183	79.0	72.5-85.5	184	17.8	11.8-23.7
25-34	458	77.3	73.2-81.4	458	27.1	22.5-31.7
35-44	589	71.5	67.5-75.5	591	34.8	30.5-39.1
45-54	688	70.5	66.8-74.2	691	45.6	41.5-49.7
55-64	627	66.9	62.8-70.9	626	47.1	42.8-51.4
65+	837	66.1	62.6-69.7	836	40.8	37.2-44.5
Education						
Less than H.S.	613	57.3	52.8-61.8	613	37.2	32.9-41.5
H.S. or G.E.D.	1,306	73.1	70.4-75.9	1,310	37.6	34.6-40.6
Some Post-H.S.	720	74.6	71.1-78.2	720	35.6	31.5-39.6
College Graduate	745	76.4	73.0-79.8	745	35.5	31.7-39.4
Income						
Less than \$15,000	623	63.2	58.6-67.9	622	37.4	32.9-42.0
\$15,000- 24,999	654	70.9	66.9-74.8	660	37.8	33.6-42.1
\$25,000- 34,999	410	68.6	63.5-73.7	411	39.7	34.4-45.0
\$35,000-49,999	515	76.8	72.9-80.7	513	37.5	32.8-42.2
\$50,000-74,000	439	73.8	69.1-78.4	439	35.4	30.4-40.3
\$75,000+	373	78.1	73.6-82.7	374	37.6	32.3-43.0

Table 13.8 Other activity and related medical advice to help lower the risk of heart disease or stroke among adults: WVBRFSS, 2004

	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Adults Who Are.....									
Eating fewer high-fat or high-cholesterol foods	1,281	59.9	56.8-63.0	2,067	69.6	67.3-71.9	3,348	64.9	63.0-66.9
Eating more fruits and vegetables	1,299	72.6	69.9-75.3	2,093	82.3	80.5-84.2	3,392	77.7	76.0-79.3
Adults Whose Health Professional Advised (in past 12 months)...									
Eating fewer high-fat or high-cholesterol foods	1,304	29.6	26.8-32.3	2,089	35.6	33.3-37.9	3,393	32.7	30.9-34.5
Eating more fruits and vegetables	1,301	30.8	28.0-33.6	2,086	39.1	36.8-41.5	3,387	35.1	33.3-37.0