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# Cardiovascular Disease

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## PREVIOUSLY HAD A HEART ATTACK

**Definition:** Respondents who answered “yes” to the question: “Has a doctor, nurse, or other health professional ever told you that you had a heart attack, also called a myocardial infarction?”

### Prevalence of previously had a heart attack

- South Dakota 4.4%
- Nationwide median 4.2%

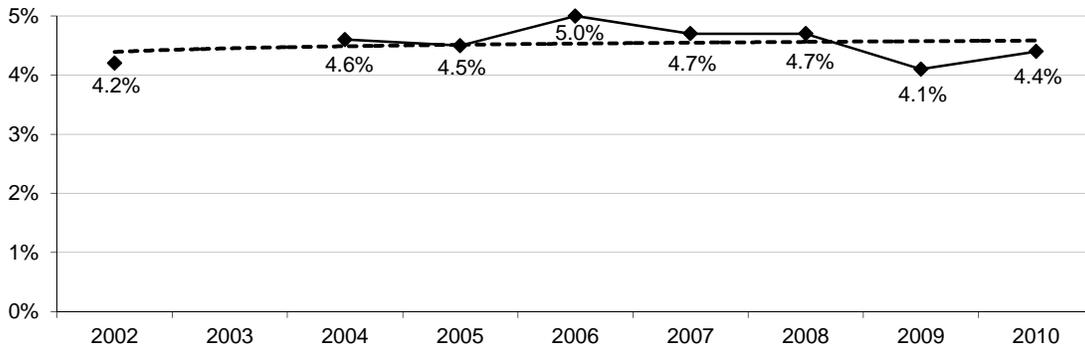
### Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for previously had a heart attack.

### Trend Analysis

This question was first asked in 2002 with 4.2 percent of respondents reporting they have previously had a heart attack. Overall, the percent of those stating they have previously had a heart attack has remained steady.

**Figure 57**  
**Percent of Respondents Who Previously Had a Heart Attack,**  
**2002, and 2004-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, and 2004-2010

**Table 42**  
**Respondents Who Previously Had a Heart Attack, 2010**

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
<b>Total</b>	<b>6,680</b>	<b>4.4</b>	<b>(3.9-5.0)</b>	<b>2,637</b>	<b>6.3</b>	<b>(5.4-7.4)</b>	<b>4,043</b>	<b>2.6</b>	<b>(2.1-3.0)</b>
<b>Age</b>									
18-24	210	0.0	-	102	0.0	-	108	0.0	-
25-34	579	0.5	(0.1-2.2)	240	0.9	(0.2-4.2)	339	0.0	-
35-44	780	0.6	(0.3-1.5)	309	1.0	(0.3-2.8)	471	0.3	(0.1-0.9)
45-54	1,284	2.4	(1.6-3.8)	545	3.5	(2.0-6.0)	739	1.4	(0.7-2.6)
55-64	1,457	6.2	(4.8-8.0)	612	9.3	(6.8-12.6)	845	3.0	(1.9-4.8)
65-74	1,160	12.6	(10.4-15.3)	464	18.8	(14.8-23.6)	696	6.9	(5.0-9.4)
75+	1,174	16.2	(13.8-19.0)	357	27.1	(22.0-33.0)	817	9.2	(7.3-11.6)
<b>Race</b>									
White	5,660	4.3	(3.8-4.9)	2,241	6.2	(5.3-7.3)	3,419	2.5	(2.1-3.0)
American Indian	776	5.1	(3.6-7.3)	298	6.4	(3.9-10.4)	478	3.9	(2.4-6.4)
<b>Region</b>									
Southeast	1,349	4.5	(3.6-5.7)	530	6.8	(5.1-9.0)	819	2.4	(1.7-3.4)
Northeast	1,431	4.9	(3.9-6.1)	561	7.1	(5.2-9.5)	870	2.9	(2.1-3.9)
Central	1,282	3.6	(2.8-4.6)	501	5.2	(3.8-7.1)	781	2.0	(1.4-2.9)
West	1,322	4.2	(3.3-5.3)	536	5.9	(4.3-7.9)	786	2.4	(1.6-3.5)
American Indian Counties	1,296	4.5	(3.5-5.7)	509	4.5	(3.2-6.3)	787	4.4	(3.1-6.4)
<b>Household Income</b>									
Less than \$15,000	652	8.3	(6.2-11.0)	230	7.4	(4.5-11.7)	422	9.2	(6.5-13.0)
\$15,000-\$19,999	417	7.9	(5.4-11.6)	149	12.1	(7.2-19.9)	268	4.3	(2.6-7.1)
\$20,000-\$24,999	558	6.8	(4.8-9.5)	216	8.3	(5.1-13.4)	342	5.5	(3.5-8.7)
\$25,000-\$34,999	768	6.1	(4.4-8.3)	334	7.9	(5.3-11.5)	434	3.7	(2.2-6.0)
\$35,000-\$49,999	1,003	4.6	(3.4-6.3)	422	6.3	(4.2-9.2)	581	2.8	(1.6-4.6)
\$50,000-\$74,999	1,025	2.5	(1.6-3.9)	437	4.8	(3.0-7.5)	588	0.2	(0.1-1.2)
\$75,000+	1,176	2.4	(1.6-3.5)	555	4.3	(2.9-6.5)	621	0.1	(0.0-0.3)
<b>Education</b>									
Less than High School	597	8.1	(6.0-11.0)	268	7.8	(5.0-11.8)	329	8.8	(5.8-13.0)
High School or G.E.D.	2,170	5.3	(4.4-6.5)	889	7.3	(5.7-9.3)	1,281	3.2	(2.4-4.3)
Some Post-High School	1,870	4.2	(3.4-5.3)	688	6.4	(4.7-8.6)	1,182	2.5	(1.8-3.4)
College Graduate	2,033	2.9	(2.2-3.8)	789	4.9	(3.5-6.7)	1,244	1.0	(0.6-1.7)
<b>Marital Status</b>									
Married/Unmarried Couple	4,034	4.2	(3.6-4.9)	1,727	6.9	(5.8-8.2)	2,307	1.5	(1.1-2.0)
Divorced/Separated	845	7.4	(5.6-9.8)	339	9.6	(6.5-14.1)	506	5.5	(3.7-7.9)
Widowed	1,053	13.5	(11.1-16.3)	164	25.6	(17.9-35.1)	889	10.8	(8.6-13.5)
Never Married	737	0.8	(0.4-1.5)	403	1.1	(0.6-2.2)	334	0.4	(0.1-1.9)
<b>Children Status</b>									
Children in Household	1,170	0.4	(0.1-1.1)	440	0.6	(0.2-2.4)	730	0.1	(0.0-0.4)
No Children in Household	398	0.4	(0.1-1.4)	210	0.7	(0.2-2.3)	188	0.0	-

Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

## National Statistics

The national median for respondents who previously had a heart attack was 4.2 percent. South Dakota had 4.4 percent of respondents who have previously had a heart attack. Alaska had the lowest percent of respondents who previously had a heart attack with 2.6 percent, while Arizona had the highest with 6.7 percent.

**Figure 58**  
**Nationally, Respondents Who Previously Had a Heart Attack, 2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

## **ANGINA OR CORONARY HEART DISEASE**

**Definition:** Respondents who answered “yes” to the question: “Has a doctor, nurse, or other health professional ever told you that you have angina or coronary heart disease?”

### **Prevalence of angina or coronary heart disease**

- South Dakota 4.6%
- Nationwide median 4.1%

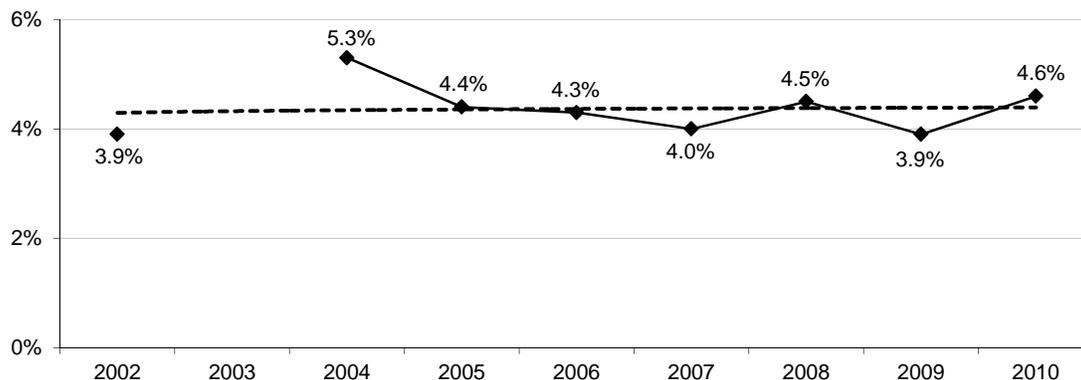
### **Healthy People 2010 Objective**

There was no stated Healthy People 2010 Objective for having angina or coronary heart disease.

### **Trend Analysis**

This question was first asked in 2002 with 3.9 percent of respondents having angina or coronary heart disease. Overall, the percent of those with angina or coronary heart disease has remained steady since that time.

**Figure 59**  
**Percent of Respondents Who Have Angina or Coronary Heart Disease, 2002, and 2004-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, and 2004-2010

**Table 43**  
**Respondents Who Have Angina or Coronary Heart Disease, 2010**

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
<b>Total</b>	<b>6,635</b>	<b>4.6</b>	<b>(4.1-5.2)</b>	<b>2,631</b>	<b>5.9</b>	<b>(5.1-6.9)</b>	<b>4,004</b>	<b>3.4</b>	<b>(2.8-4.0)</b>
<b>Age</b>									
18-24	210	0.0	-	102	0.0	-	108	0.0	-
25-34	581	0.3	(0.1-1.1)	242	0.0	-	339	0.5	(0.1-2.2)
35-44	779	0.5	(0.2-1.5)	308	0.5	(0.1-2.2)	471	0.5	(0.1-2.5)
45-54	1,284	2.3	(1.5-3.6)	545	3.0	(1.6-5.4)	739	1.6	(0.9-3.1)
55-64	1,455	6.7	(5.2-8.6)	614	9.3	(6.8-12.6)	841	4.1	(2.8-6.1)
65-74	1,147	13.6	(11.2-16.4)	462	20.4	(16.2-25.4)	685	7.2	(5.2-9.9)
75+	1,142	17.7	(15.0-20.7)	349	24.7	(19.5-30.6)	793	13.2	(10.6-16.2)
<b>Race</b>									
White	5,626	4.7	(4.1-5.3)	2,237	6.0	(5.1-7.1)	3,389	3.3	(2.8-4.0)
American Indian	769	4.2	(2.8-6.2)	297	5.1	(2.9-8.9)	472	3.4	(1.9-5.8)
<b>Region</b>									
Southeast	1,341	5.2	(4.2-6.4)	527	7.1	(5.4-9.4)	814	3.3	(2.4-4.6)
Northeast	1,417	4.4	(3.5-5.4)	560	5.1	(3.7-6.9)	857	3.7	(2.7-5.0)
Central	1,278	4.3	(3.3-5.5)	504	5.5	(3.9-7.8)	774	3.1	(2.2-4.4)
West	1,318	4.4	(3.5-5.5)	533	5.6	(4.2-7.5)	785	3.1	(2.1-4.4)
American Indian Counties	1,281	3.6	(2.7-4.8)	507	3.5	(2.4-5.2)	774	3.7	(2.5-5.5)
<b>Household Income</b>									
Less than \$15,000	637	7.1	(5.3-9.6)	224	4.1	(2.1-7.5)	413	10.0	(7.0-13.9)
\$15,000-\$19,999	414	6.2	(4.0-9.6)	150	8.2	(4.2-15.1)	264	4.5	(2.6-7.7)
\$20,000-\$24,999	556	7.4	(5.3-10.1)	216	7.5	(4.5-12.4)	340	7.2	(4.8-10.6)
\$25,000-\$34,999	764	7.1	(5.3-9.5)	332	8.9	(6.1-12.7)	432	4.9	(3.0-7.9)
\$35,000-\$49,999	1,001	4.8	(3.6-6.5)	423	6.8	(4.7-9.7)	578	2.6	(1.6-4.4)
\$50,000-\$74,999	1,023	3.3	(2.2-4.8)	436	5.1	(3.2-7.9)	587	1.5	(0.7-2.9)
\$75,000+	1,175	2.9	(2.1-4.1)	556	4.0	(2.7-5.9)	619	1.7	(0.9-3.2)
<b>Education</b>									
Less than High School	582	7.6	(5.4-10.5)	266	7.6	(4.8-11.8)	316	7.6	(4.9-11.7)
High School or G.E.D.	2,148	5.3	(4.4-6.4)	885	6.2	(4.7-8.1)	1,263	4.3	(3.3-5.5)
Some Post-High School	1,868	4.2	(3.3-5.2)	688	5.8	(4.2-7.9)	1,180	2.9	(2.1-3.9)
College Graduate	2,027	3.8	(3.0-4.8)	789	5.3	(4.0-7.1)	1,238	2.4	(1.6-3.5)
<b>Marital Status</b>									
Married/Unmarried Couple	4,017	4.6	(4.0-5.3)	1,724	7.0	(5.8-8.3)	2,293	2.2	(1.7-2.9)
Divorced/Separated	838	5.8	(4.3-7.7)	339	6.9	(4.6-10.2)	499	4.8	(3.2-7.3)
Widowed	1,030	14.2	(11.7-17.3)	162	16.8	(10.3-26.2)	868	13.7	(11.0-16.8)
Never Married	739	0.9	(0.5-1.6)	402	0.9	(0.4-2.0)	337	0.9	(0.3-2.3)
<b>Children Status</b>									
Children in Household	1,170	0.4	(0.2-0.9)	441	0.3	(0.1-1.1)	729	0.5	(0.2-1.4)
No Children in Household	399	0.0	-	210	0.0	-	189	0.0	-

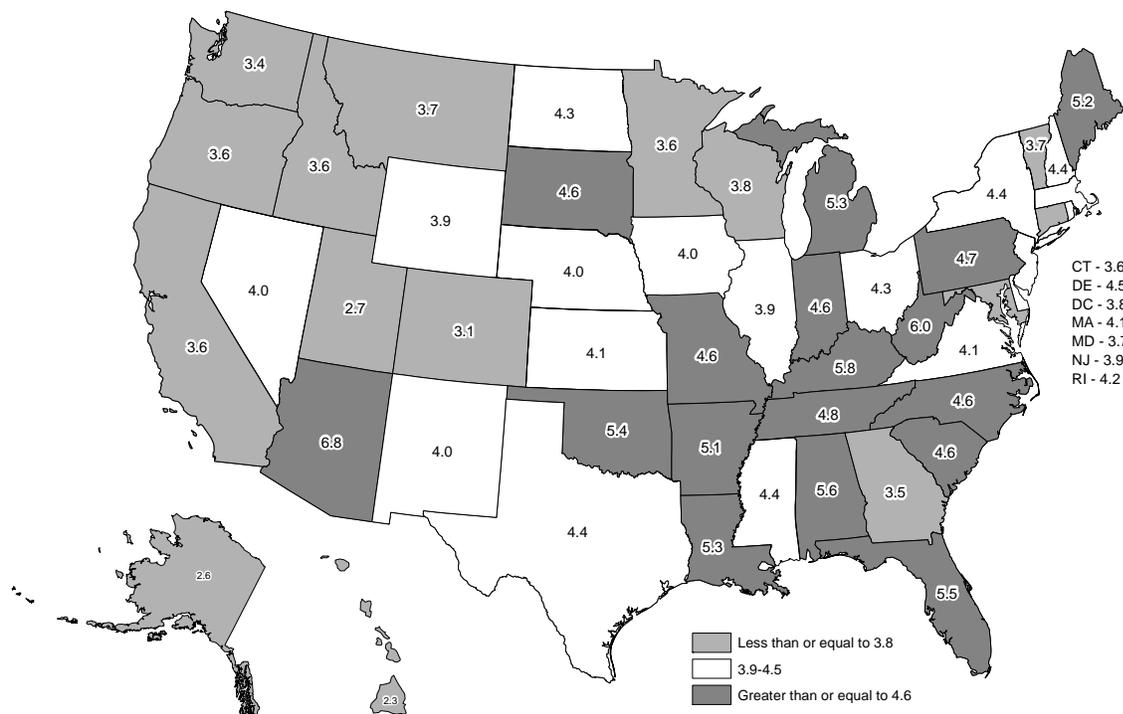
Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

## National Statistics

The national median for respondents who have angina or coronary heart disease was 4.1 percent. South Dakota had 4.6 percent of respondents who have angina or coronary heart disease. Hawaii had the lowest percent of respondents who have angina or coronary heart disease with 2.3 percent, while Arizona had the highest with 6.8 percent.

**Figure 60**  
**Nationally, Respondents Who Have Angina or Coronary Heart Disease, 2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

## PREVIOUSLY HAD A STROKE

**Definition:** Respondents who answered “yes” to the question: “Has a doctor, nurse, or other health professional ever told you that you had a stroke?”

### Prevalence of previously had a stroke

- South Dakota 2.1%
- Nationwide median 2.7%

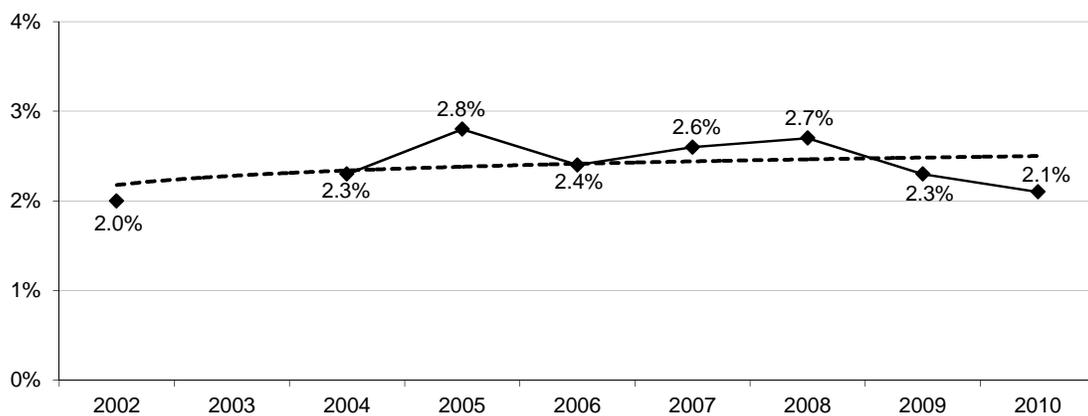
### Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for previously had a stroke.

### Trend Analysis

Overall, the percent of respondents who have previously had a stroke has remained steady since 2002. In 2010, 2.1 percent of respondents have previously had a stroke, down slightly from 2.3 percent in 2009.

**Figure 61**  
**Percent of Respondents Who Have Previously Had a Stroke,**  
**2002, and 2004-2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002, and 2004-2010

**Table 44**  
**Respondents Who Previously Had a Stroke, 2010**

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
<b>Total</b>	<b>6,695</b>	<b>2.1</b>	<b>(1.8-2.5)</b>	<b>2,645</b>	<b>2.1</b>	<b>(1.6-2.7)</b>	<b>4,050</b>	<b>2.2</b>	<b>(1.8-2.7)</b>
<b>Age</b>									
18-24	210	0.0	-	102	0.0	-	108	0.0	-
25-34	581	0.2	(0.0-0.6)	242	0.2	(0.0-1.2)	339	0.1	(0.0-0.5)
35-44	782	0.7	(0.2-1.8)	309	0.8	(0.2-3.7)	473	0.5	(0.2-1.2)
45-54	1,290	0.6	(0.3-1.0)	547	0.5	(0.2-1.0)	743	0.7	(0.3-1.6)
55-64	1,460	2.6	(1.8-3.7)	617	2.3	(1.3-4.1)	843	2.9	(1.8-4.6)
65-74	1,163	5.7	(4.4-7.5)	465	5.9	(3.9-8.7)	698	5.6	(3.9-8.2)
75+	1,173	9.2	(7.3-11.4)	354	11.3	(7.8-16.1)	819	7.9	(6.0-10.2)
<b>Race</b>									
White	5,671	2.1	(1.8-2.5)	2,247	2.1	(1.6-2.7)	3,424	2.1	(1.7-2.6)
American Indian	780	3.0	(2.0-4.6)	301	2.0	(1.1-3.5)	479	4.0	(2.3-6.8)
<b>Region</b>									
Southeast	1,350	2.0	(1.4-2.7)	528	1.9	(1.1-3.2)	822	2.1	(1.4-3.1)
Northeast	1,431	2.5	(1.9-3.3)	563	2.7	(1.8-4.2)	868	2.3	(1.6-3.3)
Central	1,289	1.8	(1.3-2.5)	507	2.2	(1.4-3.4)	782	1.5	(0.9-2.4)
West	1,326	1.9	(1.4-2.6)	535	1.7	(1.0-2.7)	791	2.2	(1.5-3.2)
American Indian Counties	1,299	3.1	(2.3-4.2)	512	2.2	(1.3-3.7)	787	4.1	(2.8-5.8)
<b>Household Income</b>									
Less than \$15,000	651	4.4	(3.0-6.4)	229	2.7	(1.2-5.7)	422	6.0	(3.9-9.2)
\$15,000-\$19,999	419	4.4	(2.8-6.8)	152	3.5	(1.6-7.5)	267	5.3	(3.1-8.8)
\$20,000-\$24,999	558	3.6	(2.4-5.4)	216	2.7	(1.4-5.2)	342	4.4	(2.7-7.3)
\$25,000-\$34,999	771	2.7	(1.7-4.2)	334	3.2	(1.8-5.6)	437	2.1	(1.1-4.0)
\$35,000-\$49,999	1,004	1.7	(1.1-2.7)	422	1.8	(0.9-3.3)	582	1.7	(0.9-3.2)
\$50,000-\$74,999	1,024	1.3	(0.7-2.1)	437	1.6	(0.8-3.3)	587	0.9	(0.4-1.7)
\$75,000+	1,179	0.8	(0.4-1.6)	558	1.2	(0.5-2.8)	621	0.3	(0.1-1.0)
<b>Education</b>									
Less than High School	600	3.6	(2.3-5.4)	269	3.7	(2.1-6.5)	331	3.4	(1.9-5.9)
High School or G.E.D.	2,178	2.2	(1.7-2.8)	891	1.8	(1.2-2.8)	1,287	2.6	(1.9-3.5)
Some Post-High School	1,869	2.1	(1.6-2.8)	690	1.8	(1.0-3.2)	1,179	2.3	(1.7-3.3)
College Graduate	2,038	1.7	(1.2-2.4)	792	1.9	(1.2-3.2)	1,246	1.5	(1.0-2.4)
<b>Marital Status</b>									
Married/Unmarried Couple	4,042	1.8	(1.4-2.2)	1,733	2.2	(1.6-2.9)	2,309	1.4	(1.0-1.9)
Divorced/Separated	846	4.5	(3.2-6.3)	340	3.0	(1.7-5.1)	506	5.9	(3.8-8.9)
Widowed	1,055	8.4	(6.6-10.6)	165	11.7	(6.9-19.2)	890	7.6	(5.9-9.9)
Never Married	741	0.3	(0.1-0.6)	403	0.4	(0.1-0.9)	338	0.2	(0.0-0.8)
<b>Children Status</b>									
Children in Household	1,172	0.3	(0.1-0.8)	441	0.4	(0.1-1.9)	731	0.2	(0.1-0.5)
No Children in Household	400	0.2	(0.1-0.8)	211	0.2	(0.0-1.2)	189	0.3	(0.1-1.2)

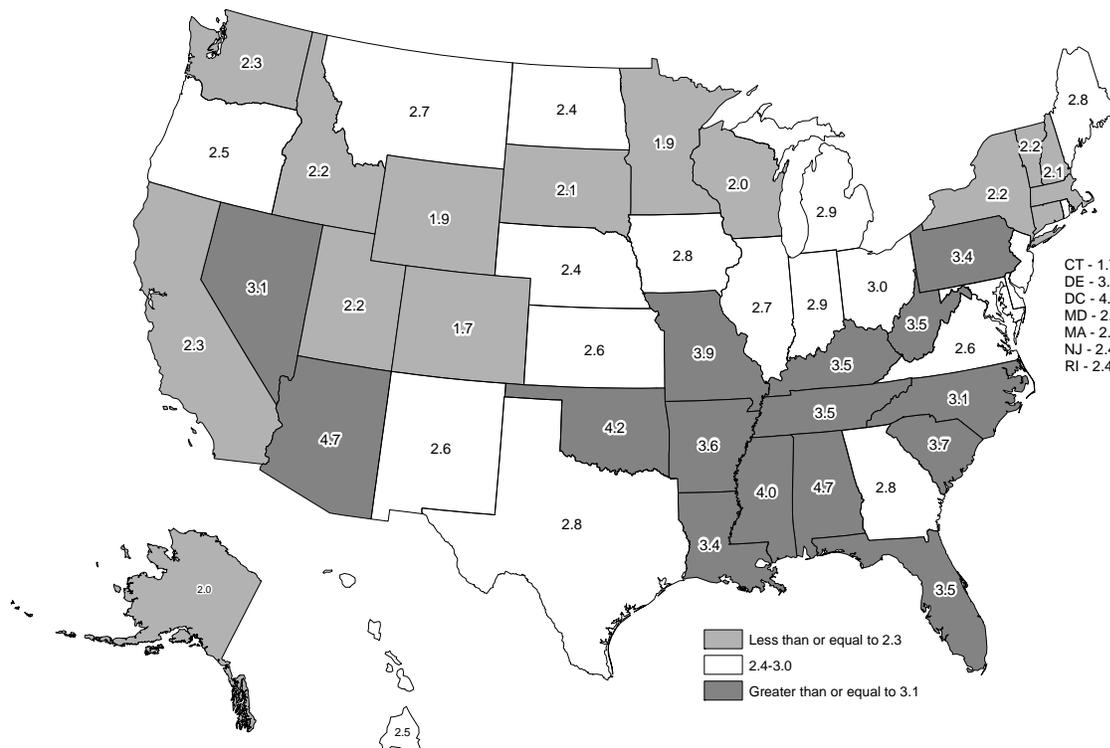
Note: \*Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

## National Statistics

The national median for respondents who previously had a stroke was 2.7 percent. South Dakota had 2.1 percent of respondents who previously had a stroke. Colorado and Connecticut had the lowest percent of respondents who previously had a stroke with 1.7 percent, while Alabama and Arizona had the highest with 4.7 percent.

**Figure 62**  
**Nationally, Respondents Who Previously Had a Stroke, 2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

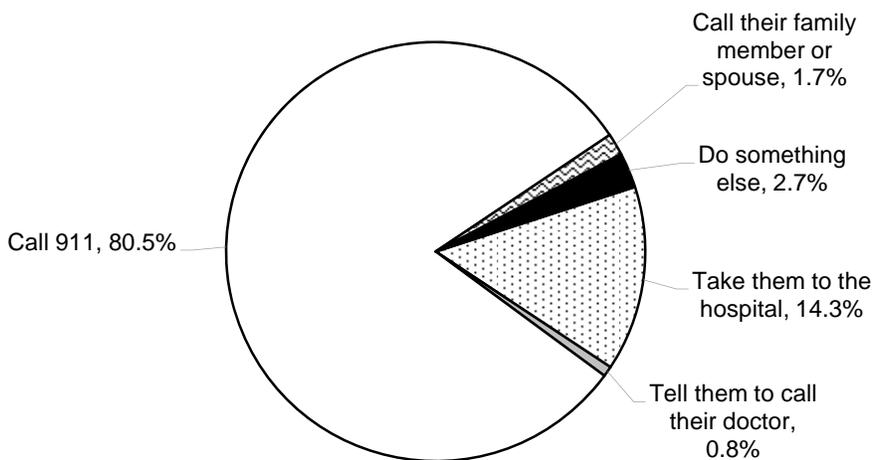
Table 45, below, displays respondents' opinions on the signs and symptoms of a stroke. A majority of respondents, 94 percent, identified sudden numbness, especially on one side of the body as a sign of a stroke while less than half of those surveyed, 39.6 percent, thought sudden chest pain or discomfort was a sign of a stroke.

<b>Signs</b>	<b>Yes</b>	<b>No</b>	<b>Don't know/ Not sure</b>
Sudden Numbness or Weakness of Face, Arm, or Leg, Especially on One Side	94.0%	3.1%	2.9%
Sudden Confusion or Trouble Speaking	89.7%	4.9%	5.4%
Sudden Trouble Walking, Dizziness, or Loss of Balance	88.2%	5.5%	6.3%
Sudden Trouble Seeing in One or Both Eyes	68.9%	9.5%	21.6%
Severe Headache with No Known Cause	63.3%	16.9%	19.8%
Sudden Chest Pain or Discomfort	39.6%	45.0%	15.4%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010

Figure 63, below, displays the respondents' opinion on the first thing they would do if they thought someone was having a stroke. Over three-fourths of the respondents stated they would call 911 first while 14.3 percent would take them to a hospital first.

**Figure 63  
Respondents' Opinion on the First Thing They Would Do if They Thought Someone was Having a Stroke, 2010**



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2010