

FINDINGS FROM THE BEHAVIORAL RISK
FACTOR SURVEILLANCE SYSTEM IN
NEW HAMPSHIRE, 2005

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Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

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Introduction

By the early 1980's, scientific research clearly showed that personal health behaviors played a major role in disease and premature death. Although national estimates of health risk behaviors had been periodically obtained through surveys conducted by the National Center for Health Statistics (NCHS), results were not available on a state-specific basis. However, state-specific information was seen as critical for state health agencies responsible for focusing available resources to effectively reduce behavioral risks and their consequent illnesses.

In 1984, The Centers for Disease Control and Prevention (CDC) established the Behavioral Risk Factor Surveillance System (BRFSS), and 15 states participated in monthly data collection. The BRFSS is a random, anonymous telephone-based survey of adults, aged 18 years and older. Since 1984, the BRFSS has grown to include all 50 states, Washington, D.C., and several U.S. territories. Currently, the BRFSS is performed in collaboration with the Behavioral Surveillance Branch (BSB) of the CDC and individual states.

What's New in this Report?

This report describes findings from data collected by the New Hampshire Behavioral Risk Factor Surveillance System during 2005. The 2005 NH BRFSS provided information on the following for the first time:

- Cardiovascular disease prevalence
- Work-related asthma
- Emotional support and life satisfaction
- Adults reporting a routine checkup in the past year
- Epilepsy
- Childhood asthma and influenza immunization
- Prevalence estimates for the Counties and for the cities of Manchester and Nashua

Frequently Asked Questions

1. Who is included in BRFSS?

The BRFSS is a telephone survey of adults aged 18 years or older in homes equipped with landline telephones and who speak English well enough to be interviewed. Individuals who live in institutions such as prisons or group quarters such as college dormitories or who do not have landline phones are not included in the sample.

2. What are 95% Confidence Intervals?

Because the BRFSS interviews only a sample of eligible NH residents and not the entire population, the survey results are an estimate of the true result that would be found if everyone in the eligible population was interviewed. We can measure how reliable this estimate is using a confidence interval (CI). For example, in Table 1-1, page 11, Self-Reported Health Status, our best estimate from the 2005 survey was that 24.5% of respondents thought their health was excellent, however, the true value may be as low as 23.2% or as high as 25.9%.

As more eligible individuals are interviewed, it becomes more likely that the estimate is close to the true value and the CI becomes narrower.

3. How do I know if two results are “statistically significant?”

Frequently Asked Question #2 explains the meaning of 95% Confidence Intervals (CI). For this report, 95% CIs are used to determine if survey results are significantly different. When comparing two groups on the same health topic, the 95% CI for each result should be compared. If the 95% CIs for the two results do not have values in common or do not “overlap” we may say that their differences are “statistically significant.” If the 95% CI’s do overlap (i.e., if the 95% CI’s share any of the same values), we cannot say, using the 2005 BRFSS data, that the two results are significantly different. This could mean that the two results are truly the same or it could mean that the sample size for the 2005 BRFSS was not large enough to detect a difference.

4. What are Healthy People 2010 and Healthy New Hampshire 2010?

Healthy People 2010 is a nationwide initiative to set health-related goals and objectives for the U.S. Healthy New Hampshire 2010 is a similar initiative led by health care and public health professionals in New Hampshire. Information about Healthy People 2010 can be found at:

www.healthypeople.gov/.

A mid-course review of NH progress toward Healthy People 2010 can be found at:

www.dhhs.state.nh.us/DHHS/CDPC/. Information about Healthy New Hampshire 2010 can be found at: www.healthynh2010.org/.



5. Where can I find the NH BRFSS questionnaire used for 2005?

For copies of the NH BRFSS questionnaires, contact the Health Statistics Section of NH DHHS or go to www.dhhs.state.nh.us/DHHS/HSDM/ where the NH questionnaires are posted.

Interpreting the tables and graphs

Most tables in this report present: the number of respondents that answered the questions indicated (“n”); the weighted percentage of respondents giving the indicated response; and the 95% Confidence Interval for the weighted percentage. Please see Frequently Asked Questions, #2 for information about Confidence Intervals. However, in tables presenting annual trends or regional estimates, the “N” provided is the total number of respondents in that year or in the region.

In this report, graphs have varying scales depending on the data being displayed. Please take note of the scale when comparing graphs and exercise caution when making comparisons. On bar graphs, 95% CIs are presented as small lines at the top of each bar. Within a bar graph, if the areas covered by the small lines overlap, the results represented by the bars are not significantly different. For example, in Figure 1-1 on page 11, the small lines at the top of the “Excellent” and “Very Good” bars clearly do not overlap. This indicates that CIs for these results do not overlap and they are significantly different. The small lines at the top of the “Excellent” and “Good” bars do appear to overlap. This indicates that the CIs for these results overlap and we cannot say that these two results are significantly different. In most cases, tables with estimates and 95% CI are included under the graphs.

Maps

Maps presented in this report were produced by the Office of Medicaid Business and Policy for the NH BRFSS. These maps represent prevalence estimates for each county, and for the Urban Areas of Manchester and Nashua, and make comparisons to the state prevalence estimates. If the 95% Confidence Interval for the County or Urban Area does not overlap with the state confidence interval, the prevalence estimates are considered statistically different.

In the tables accompanying the maps, the “Sample size N” signifies the number of individuals responding to the question within each geographic area. For example, on page 14, Table 1-4, the sample size or N is 359 for Belknap County. This means 359 survey respondents residing in Belknap County reported on their general health status in 2005.

BRFSS Methodology

The BRFSS is a telephone survey that uses a randomly generated, list-assisted sample of residential telephone numbers. From each household reached at a selected number, one adult is randomly selected and asked to complete an interview. Adults living in institutions and in other group quarters and those contacted at vacation homes are excluded, as well as those living in homes not equipped with landline telephones. In New Hampshire, interviews are only conducted in English, so contacted individuals who do not speak English well enough to be interviewed are also excluded.

To increase the likelihood of contacting individuals, BRFSS interviews are conducted year round and at various times of the day. Several attempts are made to reach a selected respondent. Once a respondent has either completed an interview or refused to participate and data quality procedures are complete, the telephone number is deleted to maintain the anonymity of the respondents.

Response and Efficiency Rates

To collect data that accurately reflect the population of New Hampshire, it is important to complete interviews with as many people in the sample as possible. Measuring success in this area involves calculating response rates or “outcome rates” for the telephone numbers called.

Three commonly reported response rates for BRFSS data are the Council of American Survey Research Organizations (CASRO), the Cooperation rate and the Refusal rate. The CASRO rate calculation assumes that unresolved telephone numbers contain the same percentage of eligible households as the records whose eligibility or ineligibility are determined. The 2005 NH BRFSS CASRO response rate was 46%. The median for all BRFSS states was 51%. The Cooperation Rate is the proportion of respondents interviewed divided by all eligible respondents who were actually contacted and selected. A Cooperation Rate below 65 percent may indicate some problem with interviewing techniques. In 2005 the Cooperation rate for the NH BRFSS was 73%. The BRFSS Refusal Rate is the proportion of all eligible respondents that refused to complete an interview or terminated an interview prior to the threshold required for a partial interview. This threshold is approximately half way through the interview. Refusals and terminations are in the numerator, and the denominator is the same as that of the CASRO Rate. The refusal rate for the NH 2005 BRFSS was 15.8%. The national median refusal rate was 14% in 2005.

Sample Design

The 2005 NH BRFSS used disproportionate stratified sampling (DSS) of telephone numbers. This DSS sample ensures that each respondent selected into the BRFSS sample has a known probability of selection but is more efficient than simple random sampling. The NH BRFSS was also stratified by geography to provide reliable estimates for the NH counties and the cities of Manchester and Nashua.

Because the BRFSS is a complex survey sample design, rather than a simple random sample, calculation of the standard error and 95% CI must include an adjustment for the sample design. Specialized statistical software is used for these calculations. For an explanation of CIs, please see #2 in Frequently Asked Questions.

Data weighting

BRFSS data are weighted to adjust for several factors. These include differences in the probability of selection, non-response and differences in age and gender between the sample and the adult population of New Hampshire.

Additional details regarding the technical features of conducting the BRFSS can be found at the BRFSS website maintained by CDC's BSB: <http://www.cdc.gov/brfss/> or by contacting the Health Statistics Section of NH DHHS.

Limitations

The BRFSS is a telephone survey of independently living adults in households with landline telephones. As a result, some sub-populations were not included in the 2005 NH BRFSS sample and results may not be representative of these populations. These include adults in group quarters or institutions such as prisons, nursing homes or military barracks and those with no telephone service or who rely on cellular telephones only.

Until recently only a small percentage of NH households were without telephone service. However, in recent years, the proportion of households nationally using cellular telephones only for communication has increased. Nationally, the proportion of households with cell phone only service increased from approximately 3% in 2003 to 7.7% in late 2005.¹ The National Center for Health Statistics (NCHS) reported in 2006 that individuals with cell phone service only differed from those with landline telephones. These differences included younger ages and lower income levels. The BRFSS is working toward methods to adjust for these technological and cultural changes. However, these limitations should be considered when interpreting results in this report.

BRFSS data are self-reported. While studies have found BRFSS data comparable to other similar surveys, self-reported responses may be subject to over- or under-estimation or to errors in recall.

Results

Health Status and Health-related Quality of Life

1. Overall Perception of Health

To measure overall health status, the 2005 NH BRFSS asked adults to rate their own health as excellent, very good, good, fair or poor. In 2005, most reported their health status as good, very good or excellent (Figure 1-1, Table 1-1).

Figure 1-1. Self-Reported Health Status Rating, 2005 NH BRFSS

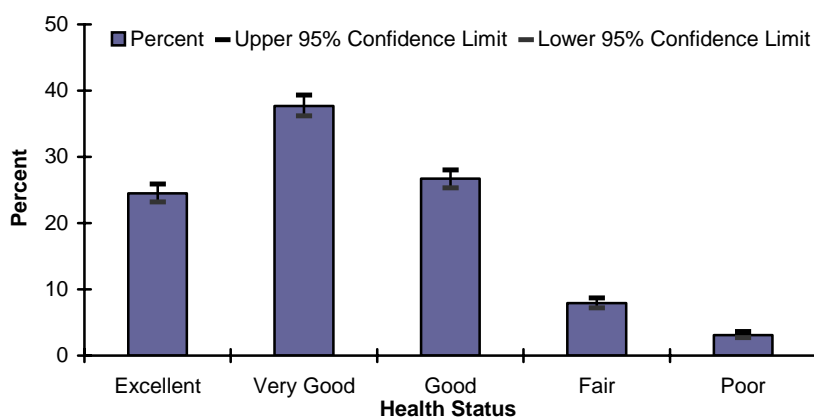


Table 1-1. Self-Reported Health Status, 2005 NH BRFSS

<i>Health Status Rating</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Excellent	1,410	24.5	23.2 – 25.9
Very good	2,175	37.7	36.2 – 39.3
Good	1,631	26.7	25.3 – 28.0
Fair	570	7.9	7.2 – 8.7
Poor	225	3.1	2.7 – 3.6

In 2005, 89% of NH adults reported their health as excellent, very good or good (Table 1-2). A significantly higher proportion of males reported their health status as excellent, very good or good compared with females, and the proportion of adults reporting excellent, very good or good health status declined significantly as age increased. Reported health status of excellent, very good or good increased significantly with increasing levels of education and income (Table 1-2), (Figure 1-2).

Figure 1-2. Self-Reported Health Status of Excellent, Very Good or Good, by Income, 2005 NH BRFSS

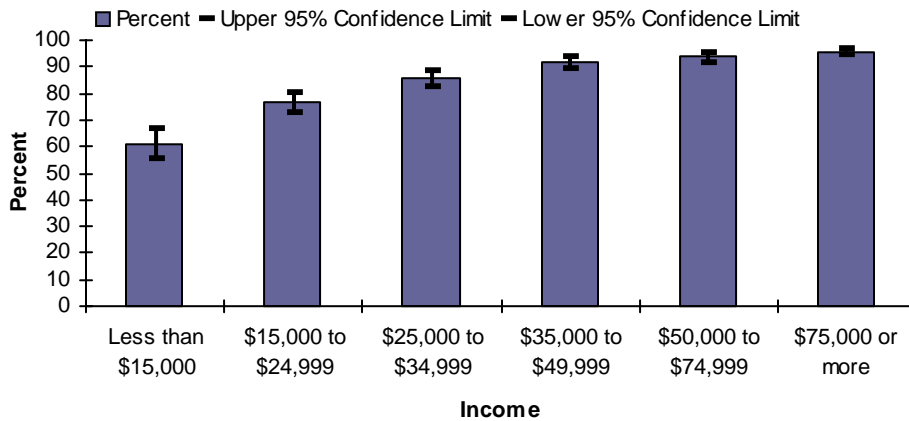


Table 1-2. Self-Reported Health Status of Excellent, Very Good or Good, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,011	88.9	88.1-89.8
Sex			
Male	2,433	90.3	89.0-91.6
Female	3,578	87.7	86.5-88.9
Age			
18-24	233	96.8	94.5-99.1
25-34	757	93.6	91.6-95.6
35-44	1,187	92.9	91.3-94.5
45-54	1,365	88.3	86.4-90.3
55-64	1,098	83.6	81.1-86.2
65+	1,288	78.9	76.3-81.5
Education			
Less Than H.S.	388	72.9	67.6-78.2
H.S. Or G.E.D.	1,795	85.0	83.1-86.8
Some Post-H.S.	1,472	89.2	87.4-91.0
College Graduate	2,346	94.6	93.6-95.6
Income			
Less Than \$15,000	486	61.2	55.6-66.7
\$15,000- 24,999	701	76.9	73.1-80.8
\$25,000- 34,999	607	85.7	82.5-88.9
\$35,000- 49,999	845	91.7	89.6-93.9
\$50,000- 74,999	1,037	93.7	92.1-95.3
\$75,000+	1,538	95.8	94.7-97.0

In 2002, a significantly lower proportion of NH adults reported their health status as excellent, good or very good compared with 2001, however, there was no significant difference observed between 2002 and 2005 (Table 1-3).

Table 1-3. Self-Reported Health Status as Excellent, Good or Very Good, 2001 - 2005 NH BRFSS

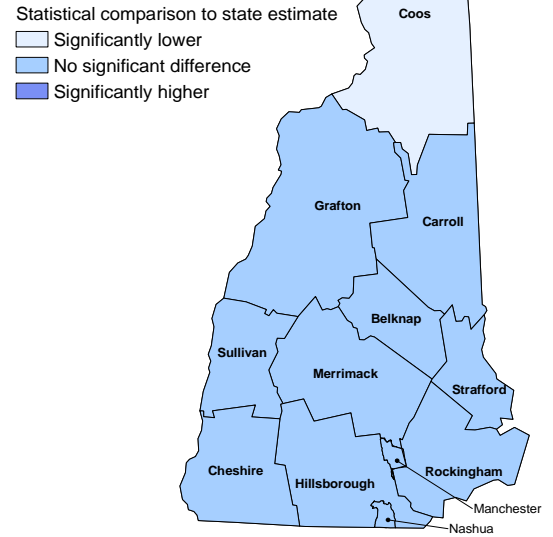
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,059	90.6	89.7-91.6
2002	5,023	88.4	87.4-89.4
2003	5,028	89.2	88.3-90.2
2004	5,055	88.9	88.0-89.9
2005	6,011	88.9	88.1-89.8

The 2005 NH BRFSS found that a significantly lower proportion of adults residing in Coos County reported their health status as excellent, very good or good compared with the NH average (Table 1-4, Figure 1-3.).

Table 1-4, Prevalence of Reported Health Status of Excellent, Very Good or Good by Geographic Region, NH 2005

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	359	89.5	86.2 - 92.9
Carroll	306	86.2	81.8 - 90.6
Cheshire	514	91.5	89.1 - 93.9
Coos	293	80.5	75.5 - 85.5
Grafton	500	89.4	86.3 - 92.5
Hillsborough	1,445	88.8	87.0 - 90.6
Merrimack	636	91.5	89.5 - 93.5
Rockingham	1013	89.1	87.1 - 91.2
Strafford	622	86.7	83.7 - 89.7
Sullivan	323	89.3	86.0 - 92.5
Urban Areas			
Manchester	320	85.0	80.7 - 89.4
Nashua	263	88.3	84.1 - 92.5
New Hampshire	6,011	88.9	88.1 - 89.8

Figure 1-3. Prevalence of Adults Reporting General Health Status as Excellent, Very Good, or Good, 2005 NH BRFSS



2. Physical Health

A second measure of health-related quality of life is the reported number of days when physical health was not good in the previous month. This included illness or injury. In 2005, 5.3% of adults reported that their physical health was not good on all of the past 30 days (Figure 2-1, Table 2-1).

Figure 2-1. Number of Days during the Past 30 Days When Physical Health Was Not Good, 2005 NH BRFSS

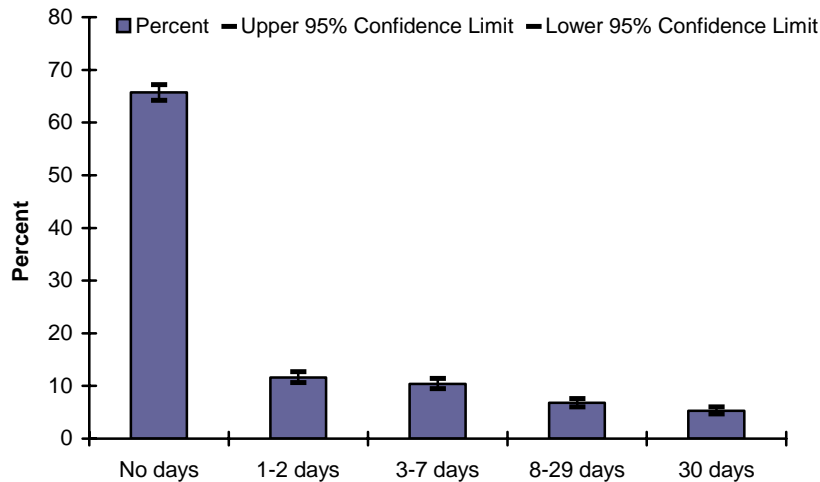


Table 2-1. Number of Days during the Past 30 Days When Physical Health Was Not Good, 2005 NH BRFSS

<i>Number of days</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
None	3,880	65.7	64.2 – 67.2
1-2 days	649	11.6	10.6 – 12.7
3-7 days	604	10.4	9.5 – 11.4
8-29 days	433	6.8	6.0 – 7.6
30 days	371	5.3	4.7 – 6.0

A higher proportion of males than females reported their physical health was good on all of the past 30 days. The proportion of adults reporting their physical health was good on all 30 days was significantly higher among college graduates than among those with less than a high school education and increased significantly as income increased (Figure 2-2, Table 2-2).

Figure 2-2. Proportion of NH Adults Having Good Physical Health on All Thirty Days of The Past Month, by Education, 2005 NH BRFSS

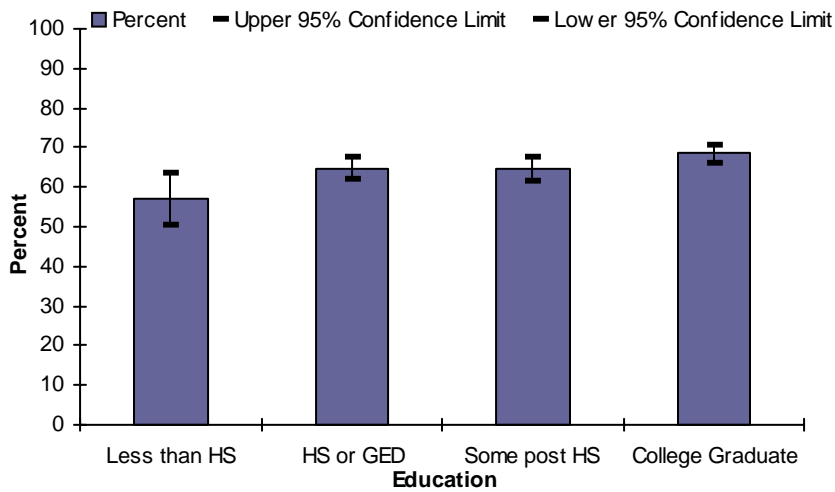


Table 2-2. Proportion of NH Adults Having Good Physical Health on All Thirty Days of the Past Month, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,937	65.7	64.2-67.2
Sex			
Male	2,419	69.3	67.0-71.6
Female	3,518	62.3	60.4-64.2
Age			
18-24	233	63.8	56.3-71.3
25-34	750	65.6	61.8-69.5
35-44	1,181	64.2	61.1-67.3
45-54	1,362	66.6	63.7-69.5
55-64	1,080	66.5	63.3-69.7
65+	1,247	66.2	63.3-69.2
Education			
Less Than H.S.	373	57.1	50.5-63.8
H.S. Or G.E.D.	1,767	64.8	62.0-67.5
Some Post-H.S.	1,460	64.6	61.5-67.7
College Graduate	2,327	68.7	66.4-70.9
Income			
Less Than \$15,000	458	36.1	30.5-41.8
\$15,000- 24,999	700	58.5	53.9-63.0
\$25,000- 34,999	604	64.8	59.9-69.6
\$35,000- 49,999	838	67.6	63.4-71.7
\$50,000- 74,999	1,033	69.1	65.8-72.4
\$75,000+	1,535	70.3	67.6-73.0

Table 2-3 examines the proportion of NH adults rating their physical health as good on all of the previous 30 days for the years 2001 and 2003 through 2005. Approximately two-thirds of NH adults reported good physical health for all days during the previous month for each of these years. There was no significant change across these years. This question was not asked in 2002.

Table 2-3. Proportion of NH Adults Reporting No Bad Physical Health Days in the Last 30 Days, 2001 - 2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,007	66.5	64.7-68.2
2002	NA	NA	NA
2003	4,983	67.0	65.5-68.5
2004	4,992	66.1	64.5-67.7
2005	5,937	65.7	64.2-67.2

3. Mental Health

Mental health is increasingly recognized as being equally as important as physical health, even though the notion of “health” is often taken to mean physical health. In *Mental Health: A Report of the Surgeon General*, the United States Surgeon General’s Office declared that “mental health is fundamental to health”.² The Surgeon General reported that a range of treatments exist for most mental disorders and “the efficacy of mental health treatments is well documented”.²

The BRFSS asked adults to report the number of days in the past 30 when their mental health was not good. This included stress, depression and problems with emotions. In 2005, 4.4% of adults reported their mental health was bad on all of the previous 30 days (Table 3-1, Figure 3-1).

Figure 3-1. Number of Days in the Past 30 Days When Mental Health Was Not Good Among NH Adults, 2005 NH BRFSS

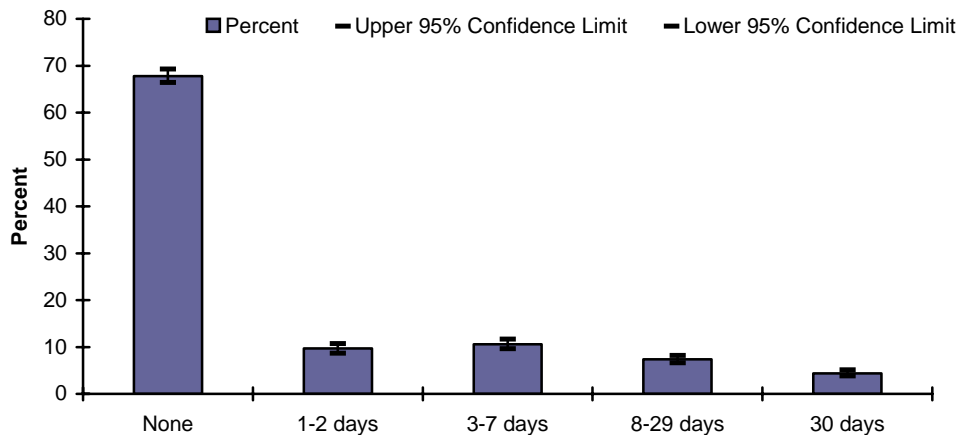


Table 3-1. Number of Days in the Past 30 Days When Reported Mental Health Was Not Good Among NH Adults, 2005 NH BRFSS

<i>Number of Days</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
None	4,074	67.8	66.4-69.3
1 to 2	546	9.7	8.7-10.7
3 to 7	597	10.6	9.6-11.7
8 to 29	445	7.4	6.6-8.2
30 days	275	4.4	3.8-5.1

The proportion of men reporting their mental health was good on all of the previous 30 days was significantly higher than the proportion of women (Table 3-2). The proportion of adults reporting their mental health was good on all of the previous 30 was significantly higher among college graduates compared with those with less than a high school education and increased significantly as age (Figure 3-2) and income increased (Table 3-2).

Figure 3-2. Proportion Reporting Mental Health Was Good on All of the Past 30 Days, by Age 2005 NH BRFSS

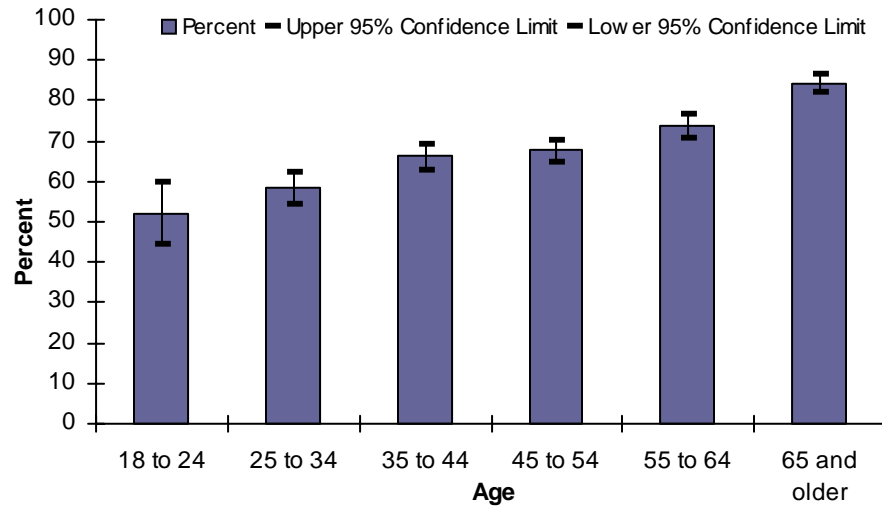


Table 3-2. Proportion of NH Adults Reporting They Had Good Mental Health on All of the Past 30 Days, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,937	67.8	66.4-69.3
Sex			
Male	2,413	74.3	72.0-76.5
Female	3,524	61.7	59.8-63.7
Age			
18-24	230	52.2	44.4-60.0
25-34	749	58.3	54.3-62.4
35-44	1,176	66.1	63.1-69.1
45-54	1,349	67.6	64.7-70.4
55-64	1,087	73.9	71.0-76.9
65+	1,265	84.2	82.0-86.4
Education			
Less Than H.S.	376	61.7	55.1-68.3
H.S. Or G.E.D.	1,765	67.0	64.2-69.9
Some Post-H.S.	1,464	65.7	62.6-68.8
College Graduate	2,322	71.0	68.8-73.2
Income			
Less Than \$15,000	468	54.1	48.0-60.2
\$15,000- 24,999	694	61.7	57.2-66.2
\$25,000- 34,999	600	67.8	62.9-72.7
\$35,000- 49,999	841	65.3	60.9-69.6
\$50,000- 74,999	1,030	68.7	65.2-72.2
\$75,000+	1,531	71.3	68.6-74.0

During 2001 through 2005, approximately two-thirds of NH adults reported good mental health on all of the previous 30 days. There was no significant change across these years. This question was not asked in 2002.

Table 3-3. Proportion Of NH Adults Reporting They Had Good Mental Health On All Of The Past 30 Days, By Year, 2001 - 2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	3,997	66.3	64.5-68.0
2002	NA	NA	NA
2003	4,974	67.1	65.6-68.7
2004	4,998	66.2	64.6-67.8
2005	5,937	67.8	66.4-69.3

4. Disability

An important indicator of quality of life is the ability to perform day-to-day activities. NH adults were asked if they were in any way limited in any activities because of physical, mental or emotional problems. In 2005, 17.3% (95% CI: 16.2-18.3) of NH adults reported they had some limitation in their activities due to a health condition.

Women were significantly more likely than men to report activity limitations due to health (Table 4-1). The prevalence of activity limitations increased significantly with increasing age and decreased significantly with increasing education and income levels (Table 4-1, Figure 4-1).

Figure 4-1. Proportion of NH Adults Reporting They Were Limited in Any Way in Any Activities Because of Physical, Mental, or Emotional Problems, by Education, 2005, NH BRFSS

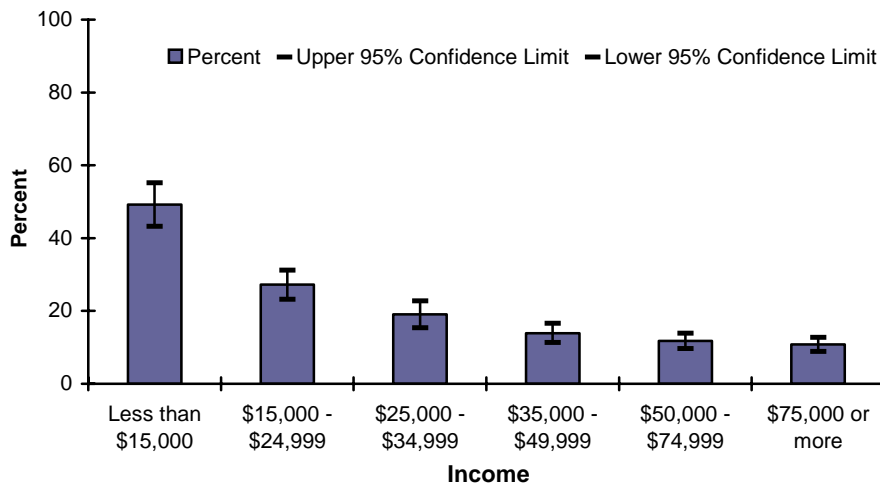


Table 4-1. NH Adults Limited in Any Way in Any Activities Because of Physical, Mental, or Emotional Problems, by Demographic Characteristics, 2005, NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,963	17.3	16.2-18.3
Sex			
Male	2,421	15.2	13.6-16.8
Female	3,542	19.2	17.7-20.7
Age			
18-24	232	8.8	4.7-12.8
25-34	751	10.9	8.4-13.5
35-44	1,170	12.7	10.6-14.8
45-54	1,355	18.5	16.2-20.9
55-64	1,091	26.6	23.6-29.6
65+	1,283	25.8	23.1-28.5
Education			
Less Than H.S.	386	29.1	23.5-34.7
H.S. Or G.E.D.	1,783	19.1	17.1-21.1
Some Post-H.S.	1,455	19.1	16.7-21.6
College Graduate	2,330	12.4	11.0-13.9
Income			
Less Than \$15,000	479	49.2	43.2-55.2
\$15,000- 24,999	699	27.2	23.2-31.2
\$25,000- 34,999	601	19.1	15.4-22.8
\$35,000- 49,999	840	13.9	11.3-16.6
\$50,000- 74,999	1,032	11.8	9.7-13.9
\$75,000+	1,532	10.8	8.9-12.7

There was a significant increase between 2001 and 2003 in the proportion of NH adults reporting they experienced limitations due to health problems. There were no significant changes between 2004 and 2005 (Table 4-2). This question was not asked in 2002.

Table 4-2. Proportion of NH Adults Reporting Activity Limitations as a Result of Physical, Mental, or Emotional Problems, by Year, 2001 and 2003 - 2005, NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,040	14.8	13.6-15.9
2002	NA	NA	NA
2003	4,970	19.4	18.2-20.6
2004	4,904	18.3	17.1-19.5
2005	5,963	17.3	16.2-18.3

In 2005, a significantly higher proportion of adults residing in Coos County and in the city of Manchester reported they were limited in some activity due to some physical, mental or emotional problem compared with the NH average.

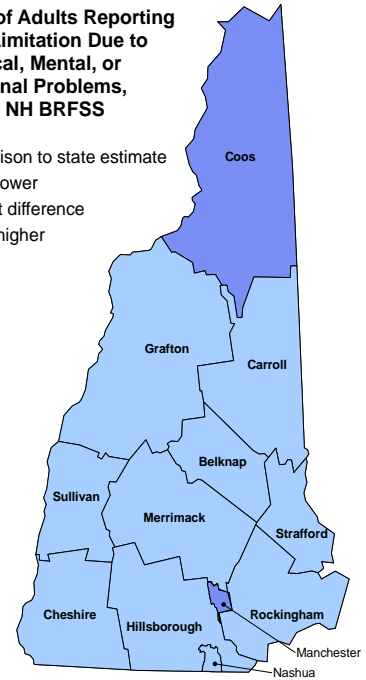
Table 4-3. Prevalence of Adults Reporting Activity Limitation Due to Physical, Mental, or Emotional Problems, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	353	15.1	11.1 - 19.1
Carroll	305	20.4	15.3 - 25.4
Cheshire	508	15.2	11.8 - 18.5
Coos	290	25.8	20.3 - 31.3
Grafton	496	15.9	12.5 - 19.3
Hillsborough	1,435	16.6	14.4 - 18.8
Merrimack	638	18.9	15.5 - 22.2
Rockingham	1,004	16.7	14.1 - 19.3
Strafford	613	19.0	15.5 - 22.5
Sullivan	321	15.7	11.6 - 19.9
Urban Areas			
Manchester	318	24.2	18.7 - 29.7
Nashua	262	15.8	10.9 - 20.7
New Hampshire	5,963	17.3	16.1 - 18.4

Figure 4-2

Prevalence of Adults Reporting Activity Limitation Due to Physical, Mental, or Emotional Problems, 2005 NH BRFSS

Statistical comparison to state estimate
 □ Significantly lower
 □ No significant difference
 □ Significantly higher



NH adults were also asked if they had any health problem that required use of special equipment. Examples of such equipment were a cane, a wheelchair, a special bed or a special telephone. In 2005, 5.4% (95% CI: 4.8-6.0) reported using some type of special equipment as a result of a health problem.

Older adults in NH were significantly more likely to report use of special equipment as a result of a health problem than younger adults (Figure 4-3, Table 4-4). The prevalence of reported use of special equipment declined significantly as levels of education and income increased (Table 4-4).

Figure 4-3. Proportion of NH Adults Reporting They Had a Health Problem That Required Use of Special Equipment, Such as a Cane, a Wheelchair, a Special Bed, or a Special Telephone, by Age, 2005 NH BRFSS

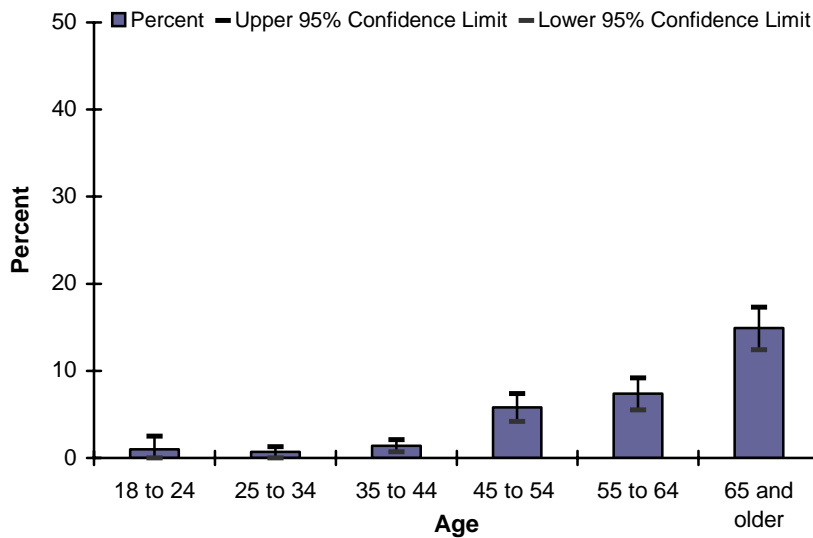


Table 4-4. Percentage of NH Adults With a Health Problem That Required Use of Special Equipment, Such as a Cane, a Wheelchair, a Special Bed, or a Special Telephone, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,978	5.4	4.8-6.0
Sex			
Male	2,427	4.6	3.8-5.4
Female	3,551	6.2	5.3-7.0
Age			
18-24	233	0.2	0.0-0.6
25-34	748	2.1	0.9-3.3
35-44	1,174	1.6	0.9-2.4
45-54	1,360	4.4	3.2-5.6
55-64	1,094	8.4	6.5-10.3
65+	1,287	15.6	13.3-17.8
Education			
Less than H.S.	389	12.0	8.4-15.5
H.S. or G.E.D.	1791	5.6	4.5-6.7
Some post-H.S.	1457	5.6	4.3-6.9
College graduate	2,331	3.9	3.1-4.8
Household income			
Less than \$15,000	482	25.0	19.9-30.1
\$15,000- 24,999	702	8.8	6.4-11.1
\$25,000- 34,999	601	6.2	4.1-8.3
\$35,000- 49,999	841	3.1	2.0-4.2
\$50,000- 74,999	1,035	2.6	1.7-3.5
\$75,000+	1,532	1.7	1.0-2.5

The proportion of NH adults reporting they used special medical equipment was significantly higher in 2005 compared with 2001 (Table 4-5). This question was not asked in 2002.

Table 4-5. Percentage of NH Adults Using Special Medical Equipment, 2001 - 2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,045	3.9	3.3-4.6
2002	NA	NA	NA
2003	4,975	5.3	4.3-5.9
2004	4,925	5.1	4.4-5.7
2005	5,978	5.4	4.8-6.0

5. Life Satisfaction

While overall satisfaction with life is related to many factors, it is strongly associated with health-related quality of life and the presence of a number of health conditions.³ There is also evidence that satisfaction with life impacts mortality.⁴

In 2005, the BRFSS asked adults to rate, in general, how satisfied they were with life. Ninety-five percent of NH adults reported they were very satisfied or satisfied (Figure 5-1, Table 5-1).

Figure 5-1. Self-reported Overall Satisfaction with Life, 2005 NH BRFSS

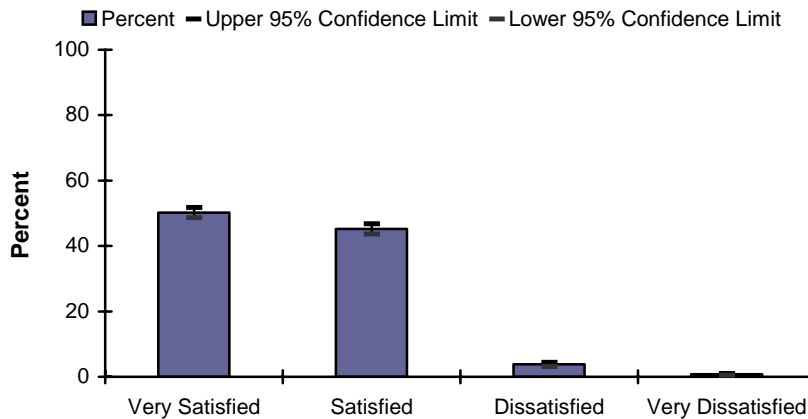


Table 5-1. Self-reported Overall Satisfaction with Life, 2005 NH BRFSS

<i>How satisfied</i>	<i>Sample size</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Very Satisfied	2,763	50.2	48.6-51.8
Satisfied	2,703	45.2	43.6-46.8
Dissatisfied	234	3.8	3.1-4.4
Very Dissatisfied	52	0.8	0.5-1.0

Life satisfaction was strongly related to both physical and mental health status.

Those reporting they were very satisfied with life were significantly more likely to report they had excellent, very good, or good health and that they had no health-related disability than those reporting they were less satisfied with life (Table 5-2). In addition, those reporting they were very satisfied with life reported a lower number of unhealthy physical and mental health days compared with those less satisfied with life (Table 5-3).

Table 5-2. Satisfaction with Life, Reported Health Status and Reported Disability, 2005 NH BRFSS

Life Satisfaction	Reported excellent, good or very good health (N=5730)	Reported no disability (N=5725)
<i>Very satisfied</i>	93.9% (92.8 - 95.0)	88.2% (86.8 - 89.6)
<i>Less than very satisfied</i>	84.3% (82.8 - 85.7)	77.4% (75.7 - 79.2)

Table 5-3. Satisfaction with Life and Average Number of Unhealthy Days, 2005 NH BRFSS

Life Satisfaction	Average number unhealthy days	
	Physical health days (N=5658)	Mental health days (N=5661)
<i>Very satisfied</i>	2.4 (2.1-2.7)	1.4 (1.1-1.6)
<i>Less than very satisfied</i>	4.1 (3.8-4.5)	4.7 (4.3-5.1)

The proportion of NH adults reporting they were very satisfied with life increased significantly with increasing levels of education and income (Figure 5-2, Table 5-4).

Figure 5-2. Proportion of NH Adults Reporting They Were Very Satisfied with Life, by Income, 2005 NH BRFSS

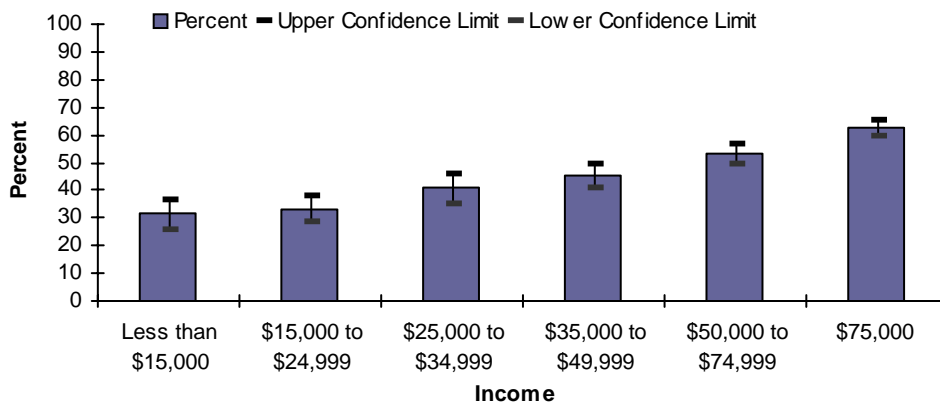


Table 5-4. Proportion of NH Adults Reporting They Were Very Satisfied with Life, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,752	50.2	48.6-51.8
Sex			
Male	2,337	50.1	47.6-52.6
Female	3,415	50.4	48.4-52.4
Age			
18-24	223	53.9	46.1-61.7
25-34	721	47.7	43.5-51.8
35-44	1,125	49.8	46.5-53.1
45-54	1,304	48.3	45.1-51.4
55-64	1,064	53.6	50.2-57.1
65+	1,241	50.5	47.3-53.7
Education			
Less than H.S.	371	37.4	30.7-44.0
H.S. or G.E.D.	1,704	42.5	39.5-45.4
Some post-H.S.	1,407	49.0	45.7-52.4
College graduate	2,262	58.9	56.5-61.3
Household income			
Less than \$15,000	469	31.3	25.7-36.9
\$15,000- 24,999	672	33.4	28.8-37.9
\$25,000- 34,999	583	40.9	35.5-46.2
\$35,000- 49,999	812	45.6	41.1-50.0
\$50,000- 74,999	999	53.3	49.7-57.0
\$75,000+	1,480	62.9	60.0-65.7

No significant differences were found by area of residence in the proportion of adults reporting they were very satisfied with life (Table 5-5, Figure 5-3).

Table 5-5. Prevalence of Adults Reporting Being Very Satisfied With Life, by Region, 2005 NH BRFSS

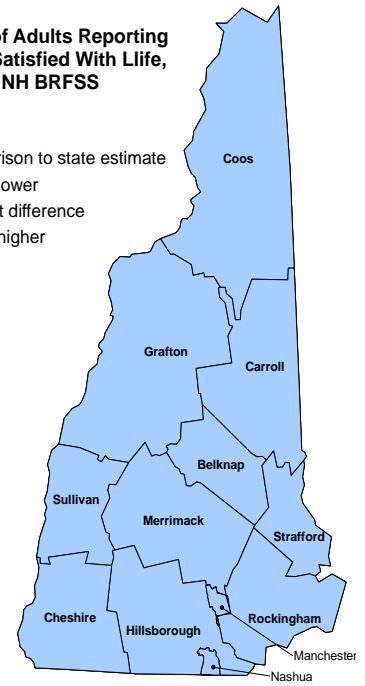
<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	333	46.9	40.3 - 53.4
Carroll	297	50.6	44.1 - 57.1
Cheshire	498	47.4	42.3 - 52.5
Coos	283	47.4	40.9 - 53.9
Grafton	485	50.6	45.0 - 56.2
Hillsborough	1,380	49.3	46.2 - 52.5
Merrimack	619	51.6	46.8 - 56.4
Rockingham	958	52.5	48.7 - 56.3
Strafford	584	50.8	46.0 - 55.5
Sullivan	315	48.0	41.6 - 54.5
Urban Areas			
Manchester	302	42.2	35.7 - 48.7
Nashua	251	47.1	40.1 - 54.2
New Hampshire	5,752	50.2	48.6 - 51.8

Figure 5-3

Prevalence of Adults Reporting Being Very Satisfied With Life, 2005 NH BRFSS

Statistical comparison to state estimate

- Significantly lower
- No significant difference
- Significantly higher



6. Social and Emotional Support

Social and emotional support is associated with health-related quality of life as well as other measures of physical and mental health.⁵ The 2005 BRFSS asked respondents to rate the emotional and social support they receive. More than 80% of NH adults reported they always or usually received needed social and emotional support.

Figure 6-1. Self-Reported Frequency of Receiving Needed Social and Emotional Support, 2005 NH BRFSS

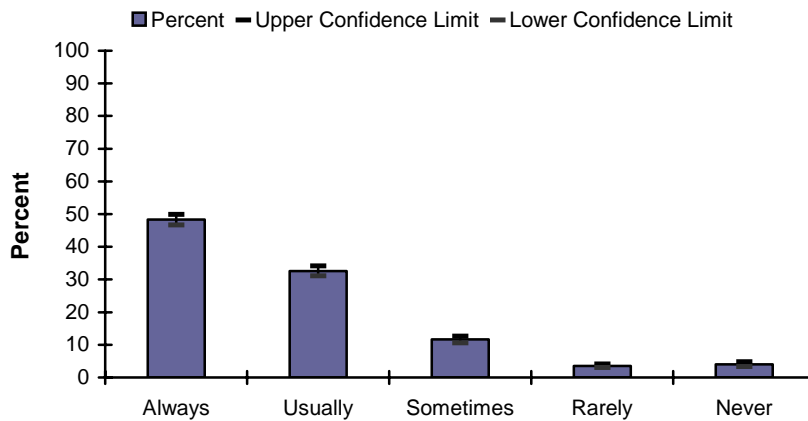


Table 6-1. Proportion of Adults Reporting They Received Various Levels of Needed Social and Emotional Support, 2005 NH BRFSS

<i>How often</i>	<i>Sample size</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Always	2,696	48.3	46.7-49.9
Usually	1,825	32.6	31.1-34.1
Sometimes	730	11.6	10.6-12.6
Rarely	228	3.5	3.0-4.1
Never	220	4.0	3.3-4.8

The proportion of NH adults reporting always receiving needed social or emotional support increased with increasing levels of income (Figure 6-2, Table 22-2). No other significant differences were found.

Figure 6-2. Percentage of Adults Reporting Always Receiving Needed Social and Emotional Support, by Income, NH BRFSS, 2005

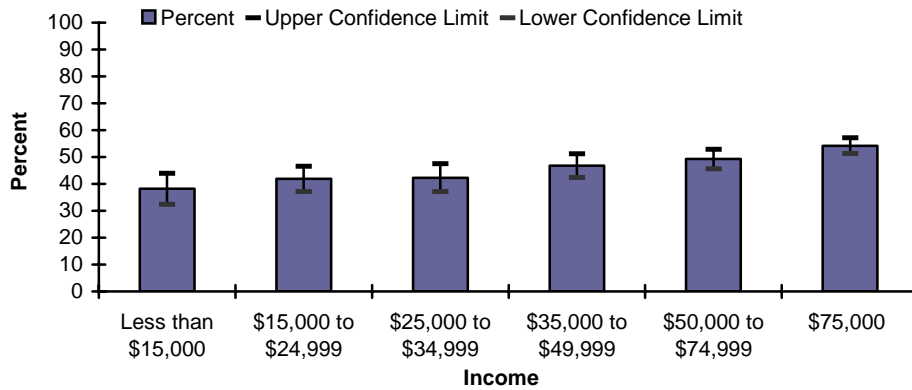


Table 6-2. Percentage of Adults Reporting Always Receiving Needed Social and Emotional Support, by Demographic Characteristics, NH BRFSS, 2005

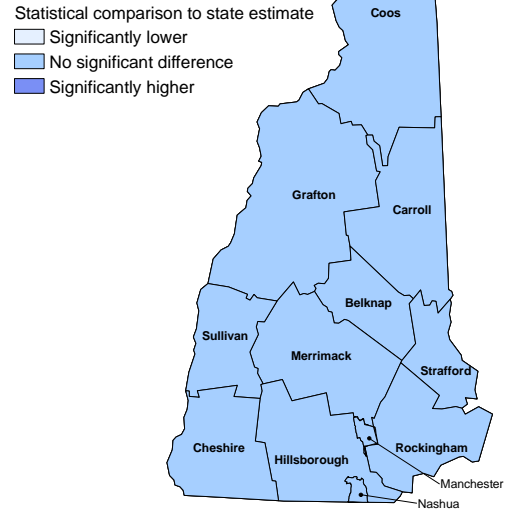
<i>Characteristic</i>	<i>Sample</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,699	48.3	46.7-49.9
Sex			
Male	2,295	47.7	45.2-50.2
Female	3,404	48.8	46.8-50.8
Age			
18-24	221	44.9	37.1-52.7
25-34	718	50.3	46.1-54.5
35-44	1,122	45.7	42.4-49.0
45-54	1,304	44.9	41.8-48.1
55-64	1,047	50.3	46.8-53.7
Education			
Less than H.S.	360	42.4	35.7-49.2
H.S. or G.E.D.	1,682	47.2	44.2-50.2
Some post-H.S.	1,394	46.4	43.1-49.7
College graduate	2,256	51.3	48.8-53.7
Household income			
Less than \$15,000	465	38.2	32.4-43.9
\$15,000- 24,999	671	41.9	37.1-46.6
\$25,000- 34,999	580	42.3	37.1-47.5
\$35,000- 49,999	803	46.8	42.4-51.2
\$50,000- 74,999	993	49.3	45.6-52.9
\$75,000+	1,477	54.2	51.3-57.2

There were no significant differences found by region in the proportion of adults reporting they always received needed social or emotional support (Table 6-3, Figure 6-3).

Table 6-3. Prevalence of Adults Reporting Always Receiving Needed Social or Emotional Support, by Region, 2005 NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	330	51.6	45.0 - 58.1
Carroll	292	48.9	42.4 - 55.4
Cheshire	490	49.8	44.6 - 54.9
Coos	277	49.6	43.0 - 56.1
Grafton	482	47.3	41.6 - 52.9
Hillsborough	1,369	46.0	42.9 - 49.2
Merrimack	614	51.6	46.7 - 56.4
Rockingham	949	47.5	43.7 - 51.3
Strafford	586	50.6	45.8 - 55.4
Sullivan	310	47.9	41.4 - 54.4
Urban Areas			
Manchester	301	46.2	39.6 - 52.8
Nashua	249	50.6	43.5 - 57.7
New Hampshire	5,699	48.3	46.7 - 49.9

Figure 6-3
Prevalence of Adults Reporting Always Receiving Needed Social and Emotional Support, 2005 NH BRFSS



Health Care Access and Usage

7. Health Insurance

“Access to quality, comprehensive health care – including dental and mental health services, is critical to the elimination of health disparities and to increasing the quality and years of healthy life for New Hampshire residents.”⁶ Barriers to health care include “lack of insurance coverage, lack of a usual source of care, lack of money to pay for care, and lack of knowledge or skepticism about the benefits of care”.⁶ People who do not have routine access to medical care may not receive early or adequate treatment or information about preventing illness. Defining populations without access to medical care is important for understanding those at risk for disease.

In 2005, when asked if they had any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare, 10.5% of NH adults reported having no health care coverage (Table 7-1).

Younger adults were significantly more likely to report no coverage than older adults with almost a quarter of NH adults aged 18 to 24 years reporting no health insurance (Figure 7-1, Table 7-1).

The proportion of NH adults with no health care coverage also declined significantly with increasing level of education and income (Table 7-1).

Figure 7-1. Proportion of NH Adults with No Health Care Coverage, by Age, 2005 NH BRFSS

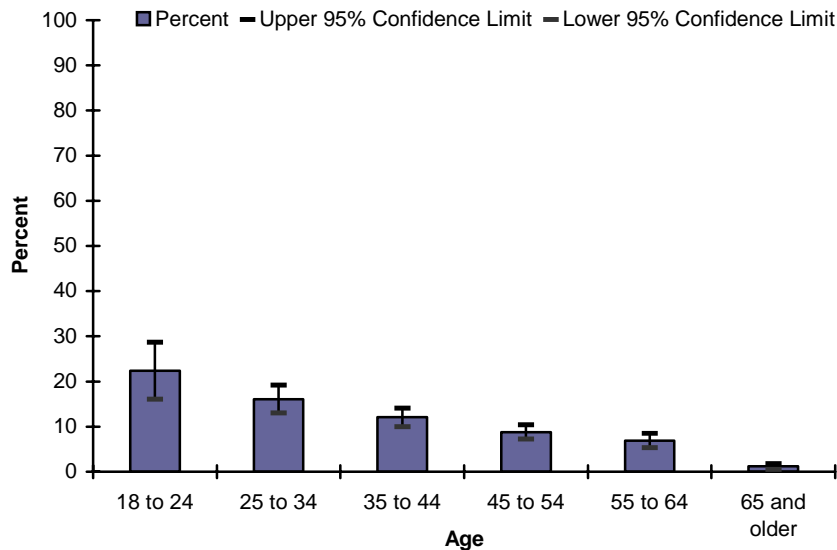


Table 7-1. Proportion of NH Adults Reporting No Health Care Coverage, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,025	10.5	9.5-11.6
Sex			
Male	2,439	11.3	9.7-13.0
Female	3,586	9.8	8.5-11.0
Age			
18-24	230	22.4	16.1-28.7
25-34	757	16.1	13.0-19.2
35-44	1,186	12.1	10.0-14.1
45-54	1,368	8.8	7.2-10.4
55-64	1,102	6.9	5.3-8.5
65+	1,298	1.2	0.5-1.8
Education			
Less than H.S.	389	26.6	20.1-33.2
H.S. or G.E.D.	1,803	14.0	11.9-16.1
Some post-H.S.	1,474	10.8	8.9-12.8
College graduate	2,349	4.9	3.8-6.0
Household income			
Less than \$15,000	489	18.6	14.3-22.9
\$15,000- 24,999	707	22.8	18.8-26.8
\$25,000- 34,999	607	17.4	13.1-21.7
\$35,000- 49,999	848	12.3	9.1-15.5
\$50,000- 74,999	1,037	7.4	5.3-9.5
\$75,000+	1,541	2.7	1.7-3.7

There was no significant change found between 2001 and 2005 in the proportion of NH adults reporting they were without some type of health care coverage (Table 7-2).

Table 7-2. NH Adults Without Some Type of Health Care Coverage, by Year, 2001 – 2005, NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,516	11.5	10.3 – 12.7
2002	4,485	11.8	10.7 – 12.9
2003	4,511	11.9	10.8 – 13.0
2004	5,055	12.1	11.0 – 13.3
2005	6,025	10.5	9.5 – 11.6

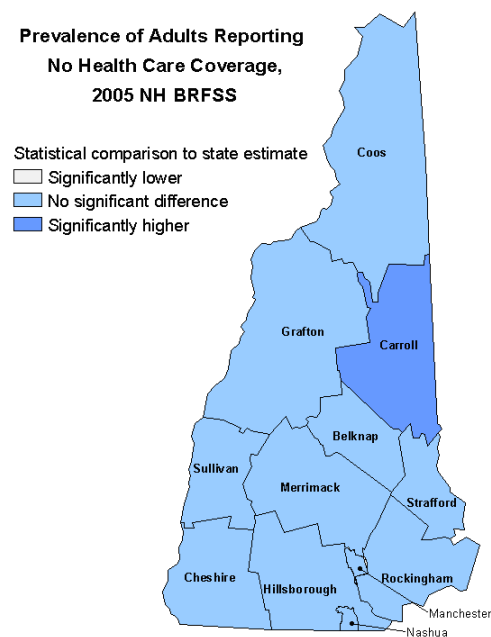
In 2005, the NH BRFSS found that a significantly higher proportion of adults in Carroll County reported no health care coverage compared with the state average (Table 7-3) (Figure 7-2).

Table 7-3. Prevalence of Adults Reporting No Health Care Coverage, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	357	15.0	10.3 - 19.8
Carroll	309	18.9	13.5 - 24.3
Cheshire	515	12.1	8.6 - 15.5
Coos	293	12.6	8.3 - 16.9
Grafton	502	10.9	7.5 - 14.4
Hillsborough	1,444	8.7	6.7 - 10.6
Merrimack	640	11.0	7.7 - 14.4
Rockingham	1,016	9.3	6.9 - 11.7
Strafford	624	10.8	7.8 - 13.8
Sullivan	325	12.0	7.4 - 16.6
Urban Areas			
Manchester	320	11.0	6.9 - 15.1
Nashua	264	6.6	2.9 - 10.3
New Hampshire	6,025	10.5	9.5 - 11.6

Figure 7-2.

Prevalence of Adults Reporting No Health Care Coverage, 2005 NH BRFSS



8. Ability to Afford Health Care

One indicator of the accessibility of health care is the proportion of individuals who cannot get health care because of cost. In 2005, 9.6% of NH adults reported there was some time in the past 12 months when they needed to see a doctor but could not because of cost (Table 8-1).

The proportion of women reporting being unable to see a doctor when needed because of cost was significantly higher than that of men. The proportion of NH adults reporting a financial barrier to care declined significantly with increasing age (Figure 8-1), education, and income (Table 8-1).

Figure 8-1. Needed To See a Doctor But Could Not Because of Cost in Past 12 Months, by Age, 2005 NH BRFSS

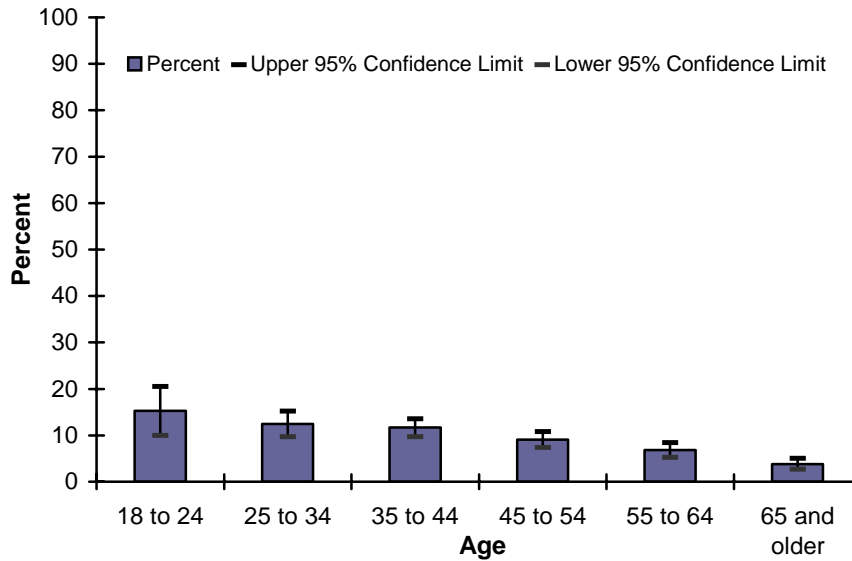


Table 8-1. Needed Medical Care, but Could Not See Doctor Because of Cost in Past 12 Months, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,029	9.6	8.7-10.6
Sex			
Male	2,440	8.1	6.7-9.5
Female	3,589	11.1	9.8-12.3
Age			
18-24	233	15.3	10.0-20.5
25-34	758	12.5	9.7-15.2
35-44	1,188	11.7	9.7-13.6
45-54	1,368	9.1	7.4-10.8
55-64	1,101	6.8	5.2-8.4
65+	1,297	3.8	2.7-5.0
Education			
Less than H.S.	390	18.8	13.5-24.0
H.S. or G.E.D.	1,804	11.9	10.0-13.8
Some post-H.S.	1,474	11.3	9.2-13.3
College graduate	2,350	5.3	4.3-6.3
Household income			
Less than \$15,000	486	28.1	22.3-33.9
\$15,000- 24,999	707	22.5	18.5-26.5
\$25,000- 34,999	608	12.3	9.1-15.6
\$35,000- 49,999	850	9.5	6.9-12.0
\$50,000- 74,999	1,038	6.7	4.7-8.6
\$75,000+	1,542	3.3	2.3-4.3

The proportion of NH adults reporting they needed to see a doctor during the past 12 months but could not because of cost varied by health insurance source. The proportions ranged from 40.3% among adults reporting no health insurance to 4.5% among adults reporting their source of health insurance was an employer or spouse's employer (Table 8-2).

Table 8-2, Percentage of NH Adults Reporting They Needed To See a Doctor During the Previous 12 Months but Could Not Because of Cost, by Reported Health Insurance Source, 2005 NH BRFSS

<i>Insurance Source</i>	<i>Sample Size (n)</i>	<i>Percent 95% Confidence Interval</i>	
Employer	3,328	4.5	3.6-5.3
Medicare	1,019	7.1	5.2-9.1
COBRA or Other	151	9.0	1.3-16.8
VA, CHAMPUS or military	127	10.4	3.5-17.3
Self purchased	319	12.5	7.9-17.1
Medicaid	182	16.0	10.6-21.5
No insurance	584	40.3	35.3-45.4

No significant difference was found between 2003, 2004, and 2005 in the proportion of NH adults reporting there was a time in the past 12 months when they needed to see a doctor but could not because of cost (Table 8-3). This question was not asked in 2001 or 2002.

Table 8-3. Proportion Reporting that, in the Past 12 Months They Needed To See a Doctor but Could Not Because of Cost, by Year, 2003 - 2005 NH BRFSS

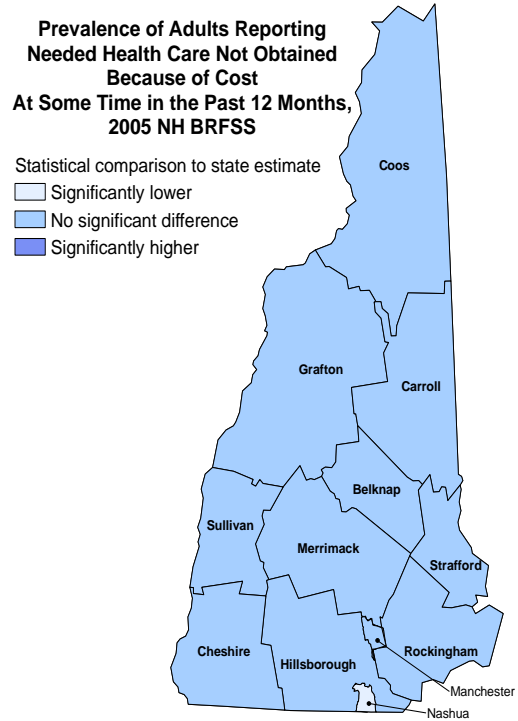
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2003	5,034	9.3	8.3 - 10.2
2004	5,059	10.6	9.6 - 11.7
2005	6,029	9.6	8.7 - 10.6

The proportion of adults residing in Nashua and reporting being unable to get needed care because of cost in the previous 12 months was significantly lower than the NH average (Table 8-4, Figure 8-2).

Table 8-4. Prevalence of Adults Reporting Needed Health Care Not Obtained Because of Cost at Some Time in the Past 12 Months, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	357	11.1	7.2 - 15.0
Carroll	309	14.5	9.8 - 19.1
Cheshire	514	9.4	6.4 - 12.5
Coos	294	14.7	10.2 - 19.1
Grafton	502	7.5	4.6 - 10.4
Hillsborough	1,448	8.2	6.5 - 9.9
Merrimack	640	9.5	6.7 - 12.4
Rockingham	1,017	9.7	7.4 - 12.0
Strafford	624	12.1	9.0 - 15.3
Sullivan	324	9.2	5.3 - 13.1
Urban Areas			
Manchester	319	11.5	7.2 - 15.8
Nashua	265	5.1	2.7 - 7.6
New Hampshire	6,029	9.6	8.7 - 10.6

Figure 8-2.



9. Personal Health Care Provider and Recent Checkup

Personal Health Care Provider

The advice of a medical provider has been found to be effective in changing a variety of health-related behaviors.^{7,8} Recent routine medical checkups and having a health care provider are two indicators of access to the health care system.

In 2005, 89.3% of adults reported they had one or more people they thought of as their personal health care provider. Adults were more likely to report having a personal health care provider if they were female, older, had higher levels of education or had household incomes over \$75,000 a year (Table 9-1, Figure 9-1).

Figure 9-1. Proportion of Adults Who Reported They Had a Personal Health Care Provider, by Age, 2005 NH BRFSS

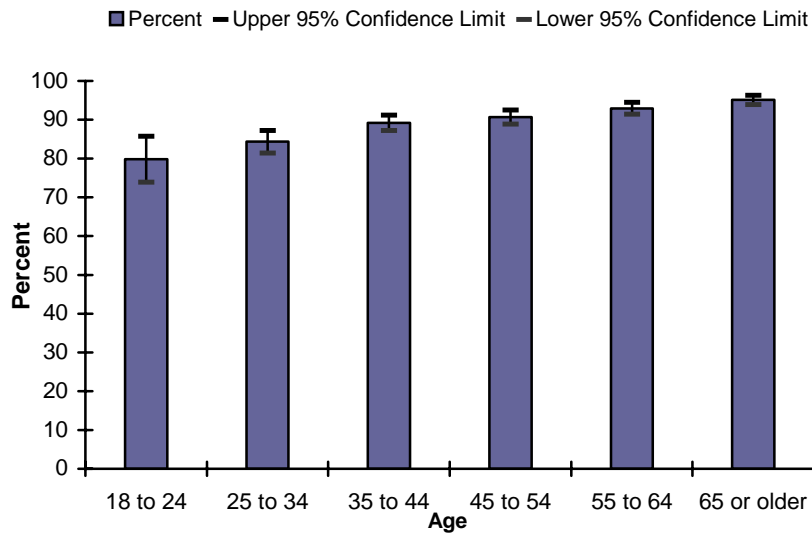


Table 9-1. Proportion of Adults Who Reported They Had a Personal Health Care Provider, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,022	89.3	88.3 - 90.2
Sex			
Male	2,435	86.1	84.4 - 87.9
Female	3,587	92.2	91.0 - 93.4
Age			
18-24	232	79.8	73.9 - 85.7
25-34	754	84.3	81.4 - 87.2
35-44	1,188	89.2	87.2 - 91.2
45-54	1,370	90.7	88.9 - 92.5
55-64	1,103	92.9	91.4 - 94.5
65+	1,291	95.1	93.9 - 96.3
Education			
Less than H.S.	389	82.2	76.3 - 88.1
H.S. or G.E.D.	1,799	88.0	86.0 - 89.9
Some post-H.S.	1,474	89.5	87.5 - 91.5
College graduate	2,349	91.3	89.9 - 92.6
Household income			
Less than \$15,000	488	87.1	83.3 - 90.8
\$15,000- 24,999	705	85.2	81.9 - 88.5
\$25,000- 34,999	606	83.3	79.0 - 87.6
\$35,000- 49,999	847	87.3	84.3 - 90.2
\$50,000- 74,999	1,039	89.2	86.9 - 91.6
\$75,000+	1,541	94.7	93.3 - 96.1

There was a significant increase between 2001 and 2005 in the proportion of NH adults reporting they had one or more personal health care providers (Table 9-2).

Table 9-2. Proportion of NH Adults Reporting They Had a Personal Health Care Provider, 2001 – 2005 NH BRFSS

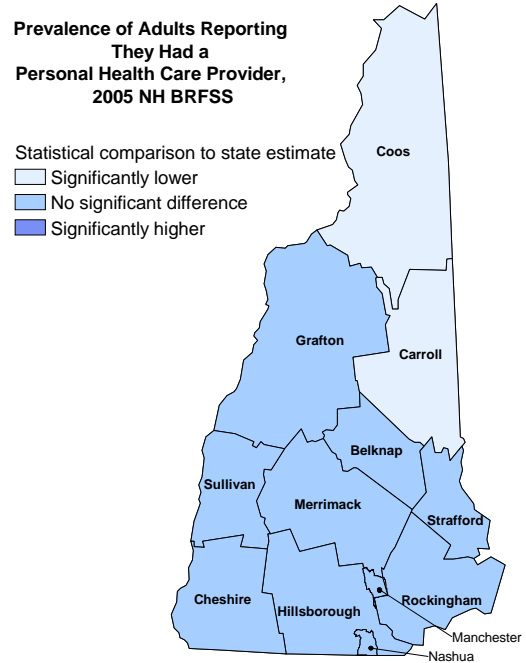
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,059	85.8	84.5 – 87.2
2002	5,024	86.7	85.6 – 87.9
2003	5,037	87.9	86.7 – 89.0
2004	5,059	87.6	86.4 – 88.8
2005	6,022	89.3	88.3 - 90.2

The proportion of adults reporting they had a personal health care provider was significantly lower in Coos and Carroll Counties compared with the NH average (Table 9-3, Figure 9-2).

Table 9-3. Proportion of NH Adults Reporting They Had a Personal Health Care Provider, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	358	86.3	81.7 - 90.9
Carroll	308	79.4	73.9 - 84.9
Cheshire	513	88.2	84.7 - 91.7
Coos	293	82.9	77.9 - 88.0
Grafton	500	88.3	84.9 - 91.7
Hillsborough	1,448	90.9	88.9 - 92.8
Merrimack	639	90.1	87.0 - 93.2
Rockingham	1,016	90.8	88.5 - 93.1
Strafford	624	88.5	85.3 - 91.6
Sullivan	323	86.9	82.0 - 91.8
Urban Areas			
Manchester	321	88.2	84.2 - 92.3
Nashua	264	92.5	88.2 - 96.8
New Hampshire	6,022	89.3	88.3 - 90.2

Figure 9-2.



Routine Checkup

In 2005, 71.0% of NH adults reported they had a routine checkup in the past year. A significantly higher proportion of women reported a checkup in the past year than men. The proportion of adults reporting a routine checkup in the past year was also significantly higher among adults who were older and among adults with household incomes of \$75,000 or more compared with adults with incomes of \$25,000 to \$34,000 (Table 9-3).

Figure 9-3. Proportion of NH Adults Reporting a Routine Checkup in the Past Year, by Gender, 2005, NH BRFSS

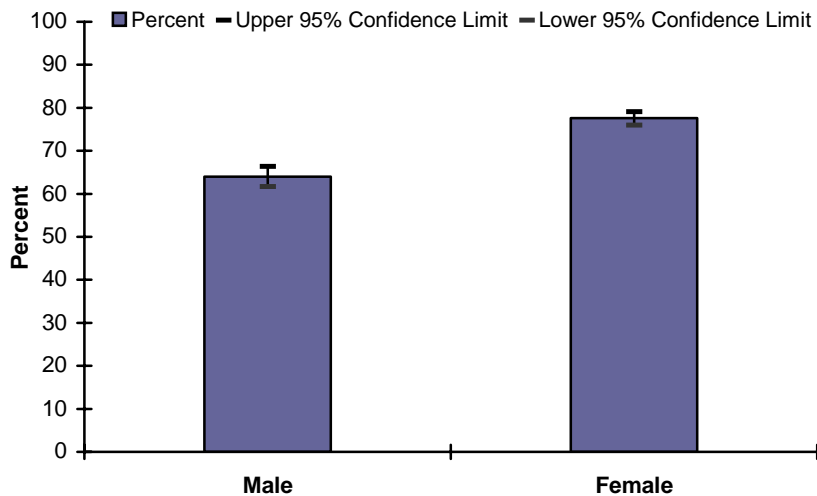


Table 9-4. Proportion of NH Adults Reporting a Routine Checkup in the Past Year, by Demographic Characteristics, 2005, NH BRFSS

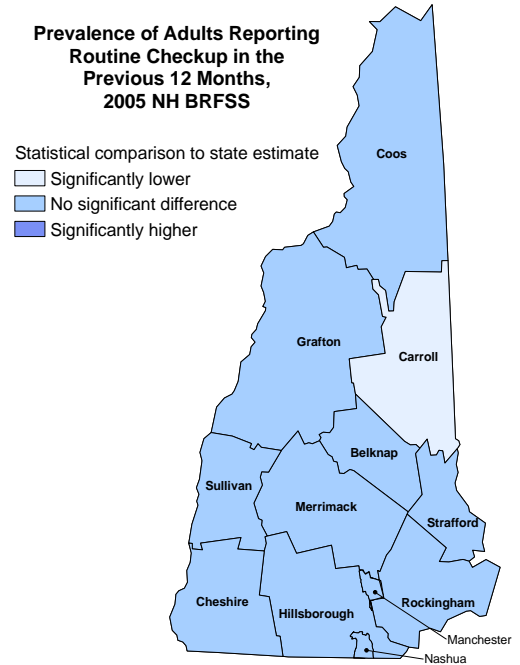
<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5988	71.0	69.6 - 72.4
Sex			
Male	3564	64.0	61.7 - 66.4
Female	2757	77.6	76.0 - 79.1
Age			
18-24	229	64.1	56.8 - 71.3
25-34	749	60.7	56.8 - 64.6
35-44	1178	65.2	62.1 - 68.4
45-54	1364	69.6	66.9 - 72.4
55-64	1099	79.7	76.9 - 82.4
65+	1287	87.5	85.6 - 89.5
Education			
Less than H.S.	382	68.7	62.4 - 75.0
H.S. or G.E.D.	1796	70.6	67.9 - 73.4
Some post-H.S.	1473	71.3	68.4 - 74.3
College graduate	2327	71.3	69.2 - 73.5
Household income			
Less than \$15,000	486	73.9	68.6 - 79.2
\$15,000- 24,999	703	68.2	63.7 - 72.7
\$25,000- 34,999	604	64.7	59.6 - 69.8
\$35,000- 49,999	844	71.1	67.2 - 75.1
\$50,000- 74,999	1031	69.1	65.7 - 72.4
\$75,000+	1534	72.9	70.4 - 75.5

In 2005, a significantly lower proportion of adults residing in Carroll County reported having a routine checkup in the previous 12 months compared with the NH average.

Table 9-5. Prevalence of Adults Reporting A Routine Checkup in the Previous 12 Months, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	356	64.3	57.9 - 70.8
Carroll	307	61.8	55.5 - 68.2
Cheshire	513	67.0	62.1 - 71.9
Coos	290	70.1	64.1 - 76.0
Grafton	499	72.8	67.6 - 78.0
Hillsborough	1,441	72.6	69.9 - 75.4
Merrimack	634	72.6	68.1 - 77.1
Rockingham	1,006	72.5	69.2 - 75.9
Strafford	620	70.9	66.6 - 75.3
Sullivan	322	64.0	57.6 - 70.4
Urban Areas			
Manchester	319	76.7	71.2 - 82.2
Nashua	264	71.8	65.6 - 78.0
New Hampshire	5,988	71.0	69.6 - 72.4

Figure 9-4.



Health Behaviors

10. Tobacco Use

In 2004, the U.S. Surgeon General issued a report titled “The Health Consequences of Smoking”.⁹ The report concluded that “smoking harms nearly every major organ of the body, often in profound ways, causing many diseases and significantly diminishing the health of smokers in general”.⁹ Smoking is the primary cause of cancer of the lung, and has been found to cause cancer of the mouth, larynx, pharynx, esophagus, uterine cervix, kidney, bladder, pancreas and stomach.⁹ Smoking also increases the risk of coronary heart disease and stroke. Other lung diseases, including chronic obstructive pulmonary disease (COPD), are related to smoking as well and cigarette smoke is one of the most common triggers for asthma attacks.⁹

In 2005, the NH BRFSS found that 20.4% of NH adults were current cigarette smokers (Table 10-2). Of these, 15.4% smoked every day and 5.0% smoked only on some days while 29.5% had smoked at some time and quit and 50.1% had never smoked (Table 10-1).

Figure 10-1. Smoking Status among New Hampshire Adults, 2005 NH BRFSS

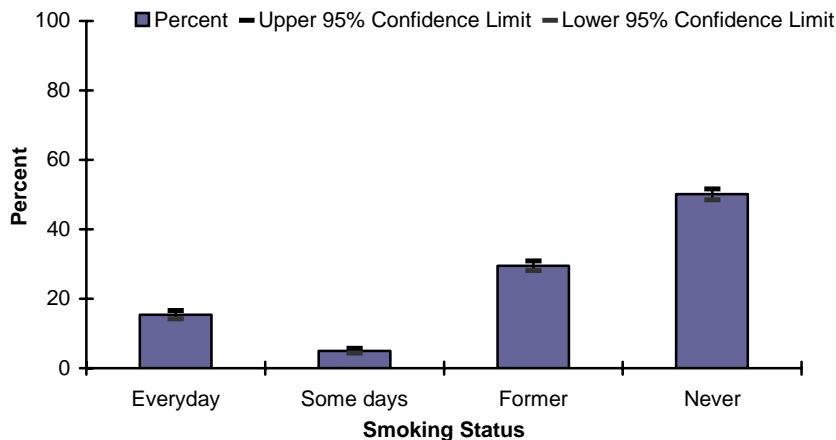


Table 10-1. Smoking Status among New Hampshire Adults, 2005 NH BRFSS

Smoking status	Sample Size (n)	Percent	95 % Confidence Interval
Smoke every day	902	15.4	14.2-16.6
Smoke some days	286	5.0	4.3-5.7
Former smoker	1,985	29.5	28.1-30.9
Never smoked	2,835	50.1	48.5-51.6

The proportion of NH adults reporting current smoking declined significantly with increasing age, education, and income (Table 10-2).

Figure 10-2. Prevalence of Current Smoking among NH Adults, by Age, 2005 NH BRFSS

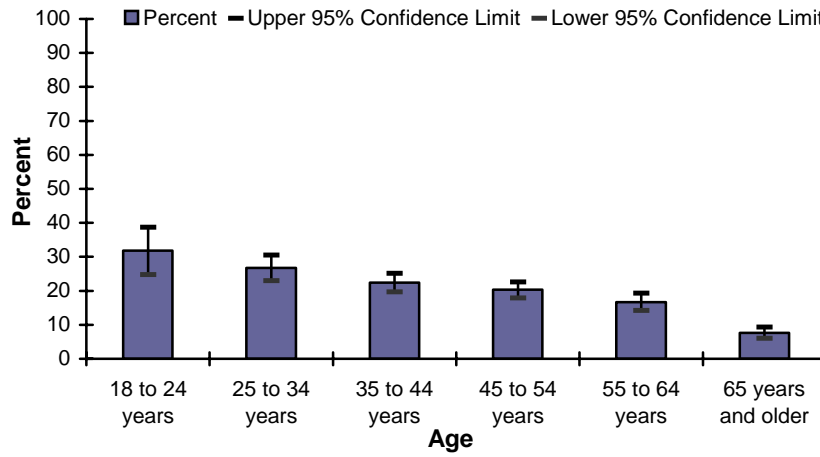


Table 10-2. Prevalence of Current Smoking, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,008	20.4	19.1-21.7
Sex			
Male	2,431	20.3	18.3-22.3
Female	3,577	20.5	18.8-22.2
Age			
18-24	234	31.8	24.8-38.7
25-34	756	26.7	23.0-30.5
35-44	1,187	22.4	19.7-25.1
45-54	1,363	20.3	17.9-22.6
55-64	1,097	16.7	14.2-19.3
65+	1,289	7.6	6.0-9.32
Education			
Less than H.S.	389	38.1	31.5-44.7
H.S. or G.E.D.	1800	29.1	26.4-31.8
Some post-H.S.	1,470	20.9	18.3-23.4
College graduate	2,338	10.4	8.9-11.9
Household income			
Less than \$15,000	486	32.5	27.3-37.8
\$15,000-24,999	702	33.5	29.1-38.0
\$25,000-34,999	607	26.6	21.9-31.4
\$35,000-49,999	847	23.9	20.1-27.8
\$50,000-74,999	1,031	17.4	14.7-20.2
\$75,000+	1,537	12.5	10.5-14.5

The report of the Surgeon General also concluded that quitting smoking has immediate as well as long-term benefits. “Within minutes and hours after smokers inhale that last cigarette, their bodies begin a series of changes that continue for years.”⁹

In 2005, the BRFSS found that 51.3%, (95% CI: 47.1% to 55.5%) of NH adults who smoked every day reported they attempted to quit smoking in the past year.

Advice by a medical provider to quit, along with brief cessation counseling, has been found to increase the chances of successfully quitting.¹⁰ The BRFSS found, in 2005, that 71.3% (95% CI: 67.8% to 74.9%) of NH adults who smoked regularly in the past year and, who saw a health care professional in the past year, had been advised to quit by their provider. In addition, 81% of adults (95% CI: 79.4% to 82.7%) who smoked regularly in the past year said they were aware of some kind of assistance to help them quit such as telephone quit lines or local health clinic services.

The smoking prevalence in 2005 was significantly lower compared with the prevalence in 2001 and 2002 (Table 10-3).

Table 10-3. Current Cigarette Smoking, 2001- 2005 NH BRFSS

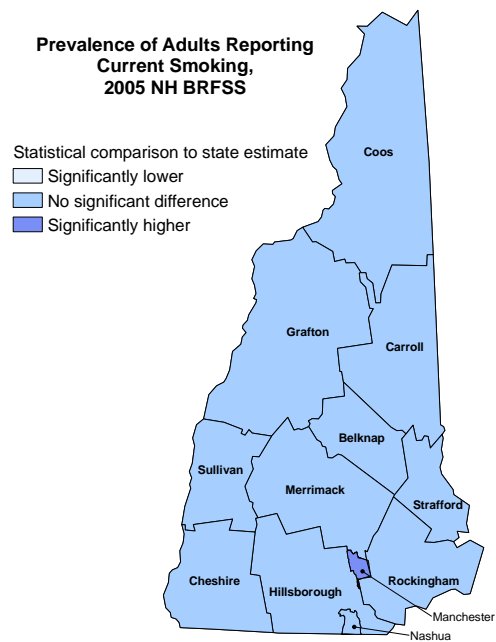
Year	Total Number of Respondents for the Year Indicated	Percent	95% Confidence Interval
2001	4,054	24.1	22.6-25.6
2002	5,021	23.2	21.8-24.6
2003	5,031	21.2	19.8-22.6
2004	5,042	21.7	20.3-23.1
2005	6,008	20.4	19.1-21.7

In 2005 the proportion of adults residing in Manchester reporting current smoking was significantly higher than the NH average.

Table 10-4. Prevalence of Adults Reporting Current Smoking, 2005, NH BRFSS

Region	Sample size (N)	Percent	95% Confidence Interval
Counties			
Belknap	358	22.6	17.2 - 28.0
Carroll	308	20.8	15.7 - 25.9
Cheshire	514	20.8	16.8 - 24.9
Coos	291	26.2	20.6 - 31.7
Grafton	498	17.0	12.8 - 21.1
Hillsborough	1,443	20.7	18.1 - 23.3
Merrimack	640	18.2	14.2 - 22.1
Rockingham	1,011	20.4	17.3 - 23.5
Strafford	623	22.1	18.2 - 26.0
Sullivan	322	19.3	14.2 - 24.4
Urban Areas			
Manchester	320	28.3	22.5 - 34.0
Nashua	265	15.0	9.9 - 20.1
New Hampshire	6,008	20.4	19.1 - 21.7

Figure 10-3.



For more information about tobacco prevention or the effects of tobacco use, please contact the NH Tobacco Prevention and Control Program at:

1-800-852-3345, ext. 6891 (in New Hampshire)
or 603-271-6891
or go to:

WWW.DHHS.STATE.NH.US/DHHS/ATOD/TPCP

For help with quitting
tobacco use call:
1-800-TRY-TO-STOP
(1-800-879-8678)

Tobacco
LIVE FREE OR DIE
NH TOBACCO PREVENTION & CONTROL PROGRAM
Call 1-800-Try-To-STOP. We Can Help.

11. Alcohol Use

The report, *Actual Causes of Death in the United States*, listed excessive alcohol use as the third leading “actual” cause of death in the U.S.¹¹ Excessive alcohol use is related to violence, child abuse and risky sexual behaviors. It is also related to chronic diseases such as cardiovascular disease and to mental health disorders such as depression, anxiety and suicidal behavior.¹² In 2000, there were an estimated 85,000 deaths in the U.S. attributable to excessive alcohol use.¹¹ These included deaths from automobile crashes, alcohol-related cancer, stroke, heart disease, and liver disease.

Fetal Alcohol Syndrome (FAS) affects 0.2 to 1.5 per 1,000 births in the U.S.¹³ Other alcohol-related birth defects occur approximately three times as often as FAS. These Fetal Alcohol Spectrum Disorders (FASD) are 100% preventable if women avoid drinking alcohol while pregnant or during the time they might become pregnant.¹² In 2005, 6.7% (95% CI: 5.2 – 8.1) of female respondents to the NH BRFSS who were of child-bearing age (ages 18 to 45) reported heavy drinking and 13.9% (95% CI: 11.4 – 16.4) reported binge drinking on at least one occasion in the previous 30 days.

The BRFSS asked adults several questions regarding alcohol consumption. In 2005, BRFSS defined heavy drinking as having, on average, more than two drinks per day for men and more than one drink per day for women. Binge drinking was defined as having five or more alcoholic beverages on any one or more occasions during the past 30 days.

Heavy Drinking

In 2005, 5.7% of NH adults reported heavy drinking. The proportion of adults aged 65 or older reporting heavy drinking was significantly lower compared with adults aged 45 to 54 years.

The proportion of adults with incomes between \$15,000 and \$34,999 reporting heavy drinking was significantly lower compared with adults with incomes of \$75,000 or more (Figure 11-1, Table 11-1).

Figure 11-1. Prevalence of Heavy Drinking Among NH Adults, by Income, 2005 NH BRFSS

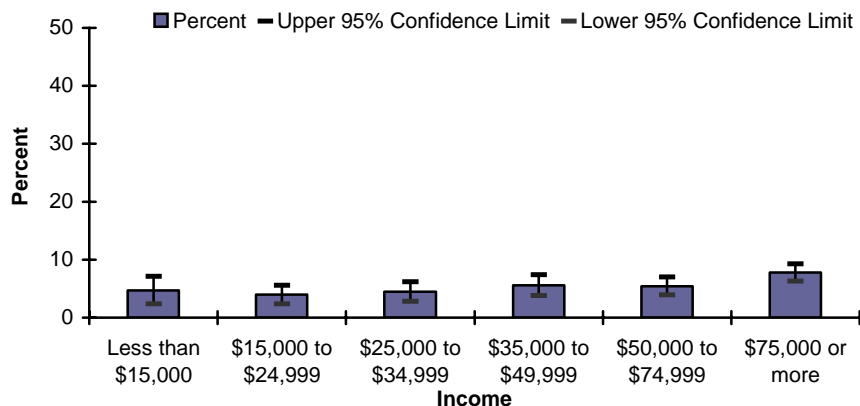


Table 11-1. Prevalence of Heavy Drinking Among NH Adults, by Demographic Characteristics, 2005 NH BRFSS

Characteristic	Sample Size (n)	Percent	95% Confidence Interval
Total	5,922	5.7	5.0-6.4
Sex			
Male	2,394	5.2	4.1-6.2
Female	3,528	6.1	5.2-7.0
Age			
18-24	227	4.3	1.5-7.2
25-34	747	5.5	3.6-7.3
35-44	1,174	6.5	4.9-8.0
45-54	1,342	7.0	5.5-8.5
55-64	1,088	6.1	4.5-7.6
65+	1,269	3.9	2.7-5.1
Education			
Less than H.S.	379	8.1	4.6-11.5
H.S. or G.E.D.	1,764	4.7	3.6-5.9
Some post-H.S.	1,450	6.2	4.6-7.7
College graduate	2,318	5.6	4.7-6.7
Household income			
Less than \$15,000	482	4.7	2.4-7.1
\$15,000- 24,999	688	4.0	2.4-5.6
\$25,000- 34,999	598	4.5	2.8-6.2
\$35,000- 49,999	837	5.6	3.8-7.4
\$50,000- 74,999	1,027	5.4	3.9-7.0
\$75,000+	1,519	7.8	6.3-9.3

The proportion of NH adults reporting heavy drinking declined significantly between 2002 and 2005 (Table 11-2).

Table 11-2. Prevalence of Heavy Drinking Among NH Adults, by Demographic Characteristics, 2001 - 2005 NH BRFSS

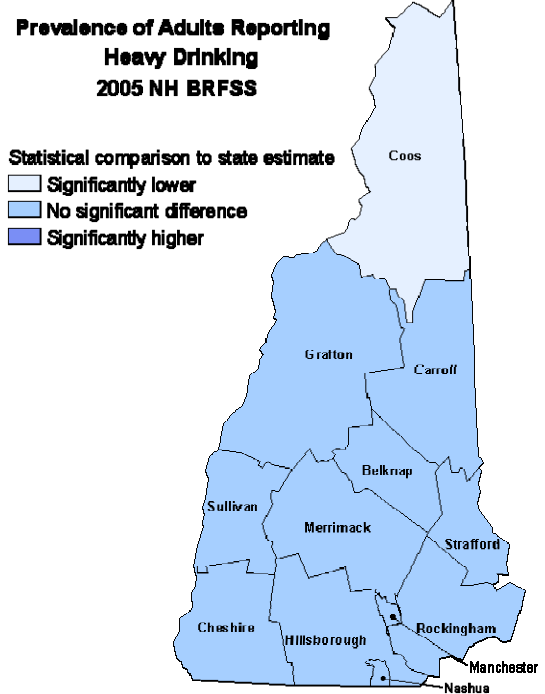
Year	Total Number of Respondents for the Year Indicated	Percent	95% Confidence Interval
2001	3,994	6.3	5.4-7.2
2002	4,992	7.5	6.6-8.4
2003	5,012	7.3	6.4-8.2
2004	5,020	6.1	5.3-6.9
2005	5,922	5.7	5.0-6.4

In 2005, the proportion of adults in Coos County reporting heavy drinking was significantly lower than the NH average.

Table 11-3. Prevalence of Adults Reporting Heavy Drinking, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	352	6.6	3.7 - 9.6
Carroll	301	9.0	5.0 - 12.9
Cheshire	508	7.2	4.1 - 10.2
Coos	287	2.4	0.8 - 4.0
Grafton	497	4.2	2.3 - 6.2
Hillsborough	1,424	6.3	4.9 - 7.7
Merrimack	630	5.1	3.2 - 7.1
Rockingham	994	5.7	4.1 - 7.2
Strafford	615	4.3	2.6 - 5.9
Sullivan	314	3.2	1.4 - 5.0
Urban Areas			
Manchester	317	6.0	3.2 - 8.8
Nashua	262	5.7	2.5 - 8.8
New Hampshire	5,922	5.7	5.0 - 6.4

Figure 11-2.



Binge Drinking

Binge drinking was defined as having five or more drinks on one or more occasions during the past 30 days. In 2005, 14.7% of BRFSS respondents reported binge drinking (Table 11-4).

The prevalence of binge drinking among NH men was significantly higher than among NH women. The proportion of adults reporting binge drinking declined significantly with increasing age (Figure 11-3, Table 11-4). No other significant differences by demographic characteristics were found.

Figure 11-3. Prevalence of Binge Drinking Among NH Adults by Age, 2005 NH BRFSS

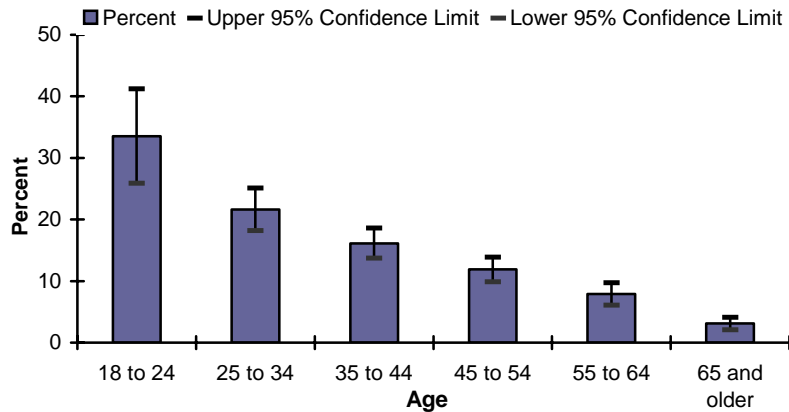


Table 11-4. Proportion of NH Adults Reporting Binge Drinking, By Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,981	14.7	13.4-16.0
Sex			
Male	2,410	21.0	18.8-23.2
Female	3,571	8.7	7.4-10.1
Age			
18-24	232	33.5	25.9-41.2
25-34	753	21.6	18.2-25.1
35-44	1,179	16.1	13.7-18.6
45-54	1,355	11.9	9.9-13.9
55-64	1,097	7.9	6.1-9.7
65+	1,287	3.1	2.1-4.1
Education			
Less than H.S.	383	12.9	8.4-17.4
H.S. or G.E.D.	1,793	14.5	12.2-16.7
Some post-H.S.	1,461	17.5	14.5-20.5
College graduate	2,333	13.4	11.5-15.3
Household income			
Less than \$15,000	483	12.7	7.5-17.9
\$15,000- 24,999	703	11.9	8.5-15.4
\$25,000- 34,999	602	17.7	12.9-22.6
\$35,000- 49,999	842	13.5	10.0-17.0
\$50,000- 74,999	1,032	16.6	13.6-19.7
\$75,000+	1,530	16.5	14.1-18.8

The prevalence of binge drinking was significantly lower in 2005 compared with 2003 (Table 11-5).

Table 11-5. Prevalence of Binge Drinking By Year, 2001 – 2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,018	15.7	14.4-17.1
2002	4,980	16.6	15.3-17.9
2003	5,014	17.7	16.4-19.0
2004	5,022	16.1	14.7-17.4
2005	5,981	14.7	13.4-16.0

12. Weight and Weight Control

Obesity, related to poor diet and physical inactivity, is the second leading actual cause of death in the U.S.¹¹ In 2000, an estimated 365,000 people in the U.S. died from diseases related to overweight and obesity.¹¹ CDC recommends controlling weight by remaining physically active and by choosing foods rich in vitamins and other nutrients, but lower in calories.¹⁴ These foods include fruits, vegetables, whole grains and fat-free or low fat dairy products.¹⁴ Overweight and obesity status are typically determined by calculating a person's Body Mass Index (BMI). BMI is a person's weight (in kilograms) divided by their height (in meters) squared.¹⁵

The BRFSS asks individuals to report their height and weight. BMI is calculated from that self-reported information. The calculated BMI is then classified as overweight if it is between 25.0 and 29.9 and obese if it is 30.0 or higher.¹⁵ Studies have found that BMI collected by telephone surveys such as the BRFSS may underestimate respondents' BMI and the prevalence of obesity and overweight.¹⁶ The trend over time is consistent with other surveys however. This should be kept in mind when interpreting these findings.

In 2005, 60.0% (95% CI: 58.4-61.6) of NH adults reported a BMI classified as overweight or obese. The prevalence of obesity was 23.1% and the prevalence of overweight was 36.8% (Table 12-1).

Figure 12-1. Prevalence of Weight Classifications Based on Body Mass Index, 2005 NH BRFSS

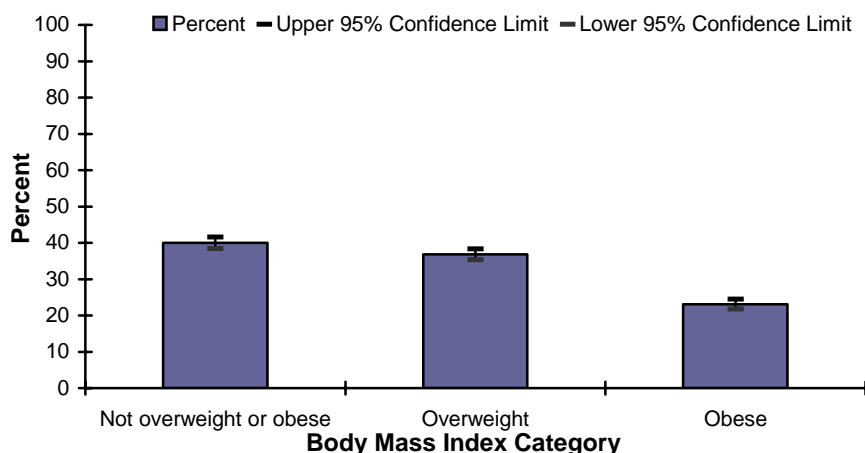


Table 12-1. Prevalence of Weight Classifications Based on Body Mass Index, 2005 NH BRFSS

<i>BMI Category</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Not Overweight or Obese	2,277	40.0	38.4-41.6
Overweight	2,105	36.8	35.3-38.3
Obese	1,354	23.1	21.8-24.5

Overweight

The prevalence of BMI categorized as overweight was significantly lower among women compared with men (Figure 12-2, Table 12-2). The prevalence of overweight among NH adults aged 18 to 24 was significantly lower than among older adults (Table 12-2).

Figure 12-2. Prevalence of Overweight or Obesity Among NH Adults, by Gender, 2005 NH BRFSS

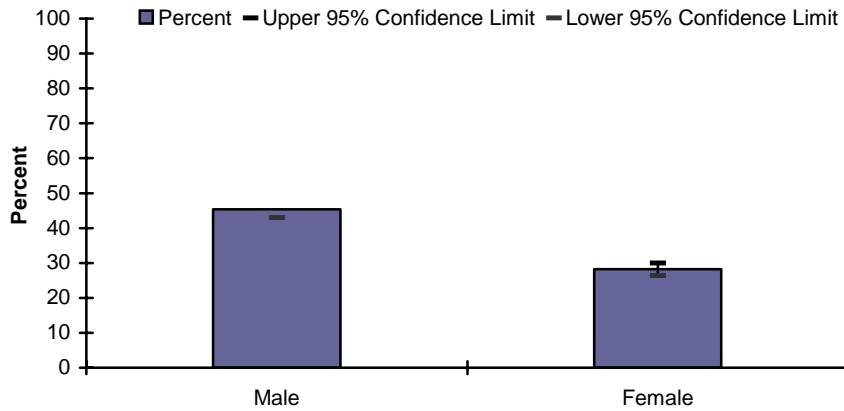


Table 12-2. Proportion of Adults Reporting a BMI Categorized as Overweight, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,736	36.8	35.3-38.3
Sex			
Male	2,413	45.4	43.0-47.8
Female	3,323	28.2	26.4-30.0
Age			
18-24	228	18.6	12.9-24.2
25-34	715	35.6	31.5-39.7
35-44	1,132	38.0	34.8-41.3
45-54	1,309	39.9	36.8-43.0
55-64	1,053	41.6	38.1-45.0
65+	1,240	40.3	37.2-43.4
Education			
Less than H.S.	381	32.1	26.3-37.9
H.S. or G.E.D.	1,713	35.5	32.7-38.3
Some post-H.S.	1,391	38.1	35.0-41.3
College graduate	2,242	37.6	35.3-40.0
Household income			
Less than \$15,000	467	31.4	26.0-36.9
\$15,000- 24,999	665	36.4	31.8-40.9
\$25,000- 34,999	576	37.1	32.2-42.0
\$35,000- 49,999	817	36.8	32.7-40.9
\$50,000- 74,999	997	40.2	36.6-43.7
\$75,000+	1,496	38.0	35.2-40.9

There was no significant change found in the proportion of adults with BMI categorized as overweight between 2001 and 2005 (Table 12-3).

Table 12-3. Proportion of Adults Reporting a BMI Categorized as Overweight, by Year, 2001- 2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	3,830	36.6	(34.9-38.3)
2002	4,765	38.5	(36.9-40.1)
2003	4,760	36.7	(35.1-38.3)
2004	4,823	36.1	(34.5-37.7)
2005	5,736	36.8	(35.3-38.3)

Obesity

In 2005, 23.1% of NH adults had a BMI categorized as obese (Table 12-4). A significantly lower proportion of adults aged 18 to 24 were obese compared with those aged 35 to 64 and the prevalence of obesity among adults aged 65 or older was significantly lower than among adults aged 55 to 64. The prevalence of obesity was significantly lower among college graduates compared with other educational levels (Table 12-4).

Table 12-4. Proportion of Adults Reporting a BMI Categorized as Obese, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,736	23.1	21.8-24.5
Sex			
Male	2,413	24.4	22.4-26.5
Female	3,323	21.9	20.2-23.5
Age			
18-24	228	14.9	9.4-20.4
25-34	715	23.1	19.6-26.7
35-44	1,132	23.3	20.5-26.2
45-54	1,309	24.7	22.1-27.4
55-64	1,053	29.3	26.2-32.5
65+	1,240	21.3	18.7-23.9
Education			
Less than H.S.	381	26.2	20.6-31.9
H.S. or G.E.D.	1,713	27.1	24.5-29.7
Some post-H.S.	1,391	24.7	22.0-27.5
College graduate	2,242	18.6	16.7-20.5
Household income			
Less than \$15,000	467	27.7	22.2-33.2
\$15,000- 24,999	665	26.2	21.8-30.6
\$25,000- 34,999	576	22.6	18.4-26.9
\$35,000- 49,999	817	26.3	22.6-30.1
\$50,000- 74,999	997	22.7	19.7-25.7
\$75,000+	1,496	21.1	18.8-23.5

The proportion of NH adults with a BMI categorized as obese increased significantly between 2001 and 2005 (Table 12-5).

Table 12-5. Proportion of Adults Reporting a BMI Categorized as Obese, by Year, 2001-2005 NH BRFSS

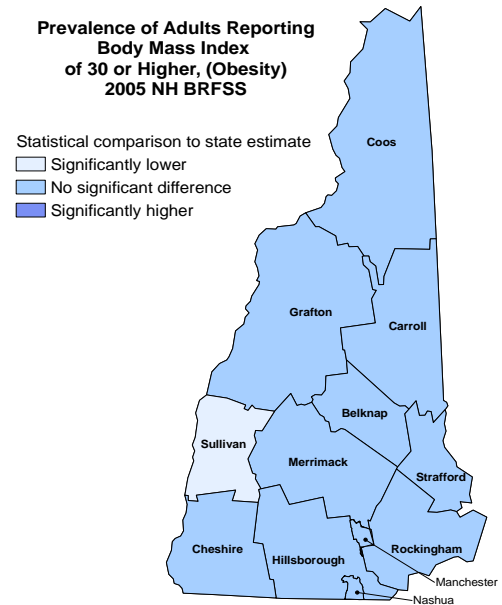
Year	Total Number of Respondents for the Year Indicated	Percent	95% Confidence Interval
2001	3,830	19.4	18.0-20.8
2002	4,765	17.9	16.7-19.1
2003	4,760	20.2	18.9-21.5
2004	4,823	21.6	20.2-23.0
2005	5,736	23.1	21.8-24.4

In 2005, the prevalence of obesity was significantly lower among adults in Sullivan County compared with the NH average.

Table 12-6. Prevalence of Obesity by County and Urban Areas (Adults Reporting a Body Mass Index of 30 or Higher), 2005, NH BRFSS

Region	Sample size (N)	Percent	95% Confidence Interval
Counties			
Belknap	341	22.6	17.4 - 27.8
Carroll	296	17.6	12.7 - 22.5
Cheshire	490	24.6	20.1 - 29.1
Coos	278	28.9	23.1 - 34.8
Grafton	475	23.8	18.9 - 28.7
Hillsborough	1,366	23.6	21.0 - 26.3
Merrimack	613	23.2	19.2 - 27.2
Rockingham	970	24.0	20.8 - 27.2
Strafford	596	23.9	20.0 - 27.9
Sullivan	311	16.6	12.2 - 21.1
Urban Areas			
Manchester	307	22.9	17.4 - 28.3
Nashua	247	27.5	21.3 - 33.7
New Hampshire	5,736	23.1	21.8 - 24.5

Figure 12-3.



Healthy New Hampshire 2010 established an objective for reducing the prevalence of overweight and obesity among NH adults. The objective set a target of no more than 40% of NH adults having a BMI classified as overweight or obese by 2010.

The report found that “healthy eating and exercise patterns, established in childhood and maintained throughout life, result in higher quality of life and can prevent premature death and disability. Moderate physical activity and a healthy diet reduce risks for high blood pressure, diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems and some types of cancer”.⁶

In 2005, the BRFSS found that 60% (95%CI: 58 – 62) of NH adults reported a BMI classified as overweight or obese.



HNH2010 Objective: Reduce the prevalence of overweight and obesity.

Target	40 percent
Baseline (1999)	50 percent
Current (2005)	60 percent

<p>To Calculate BMI</p> <p>BMI = Formula: weight (in kilograms) / [height (in meters)]²</p> <p>Normal weight BMI: less than 25.0 Overweight BMI: 25.0–29.9 Obese BMI: 30.0 and higher</p> <p>For more information, visit the BMI Calculator at the Centers for Disease Control and Prevention:</p> <p>http://www.cdc.gov/nccdphp/dnpa/bmi/index.htm</p> <p>or at the</p> <p>National Heart, Lung, and Blood Institutes:</p> <p>www.nhlbisupport.com/bmi/bmicalc.htm</p>
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13. Physical Activity

Moderate, regular physical activity can reduce the risk of developing heart disease, stroke, type 2 diabetes, high blood pressure and colon cancer.¹⁷ CDC recommends that adults engage in moderate-intensity physical activities for at least 30 minutes on five or more days of the week or in vigorous-intensity physical activity three or more days per week for 20 or more minutes per occasion.

CDC recommends that “persons with known cardiovascular disease or persons who have already experienced a major cardiovascular event, such as a heart attack, stroke, or heart surgery, should have a physical evaluation by their physician before engaging in even a moderate physical activity program. But other than in those cases, most adults do not need to consult their physicians before engaging in moderate-intensity physical activity. If, however, they are planning to engage in vigorous-intensity physical activity, experts recommend that men over age 40 and women over age 50 should also consult a physician first.”¹⁷

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity makes the following recommendations for adults considering becoming more physically active¹⁸:

- You don't need special skills or training to be physically active. Walking is a great way to be active.
- Physical activity should be initiated slowly, and the intensity should be increased gradually (e.g., start with a 10-minute walk three times a week and work your way up to 30 minutes of brisk walking or other form of moderate activity five times a week).
- Activities can be split into several short periods (e.g., 10 minutes three times a day) instead of one longer period (e.g., 30 minutes once a day).
- Select activities that you ENJOY and can fit into your daily life. Using the stairs instead of elevators and parking farther from destinations are ways you can easily add physical activity into your daily routine.
- It may take time to incorporate more activity into your daily life. Don't get discouraged if at first you miss a day or two; just keep trying and do your best to make it a regular part of your life. You will soon realize how good it feels to be physically active and fit.
- Ask for support from friends and family; likewise, support the people in your life who are trying to be physically active.
- Many forms of physical activity can be social, allowing you to converse and spend time with family or friends or to develop new relationships.
- Make activity a priority...FOR HEALTH.

The BRFSS asked adults if, during the past month, other than their regular job, they participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise. Most NH adults (68.3%, 95% CI: 64.6 – 68.3) who work are in jobs that require mostly sitting or standing.

In 2005, regardless of employment status, the proportion of adults reporting no leisure time activity in the past 30 days was 21.6% (Table 13-1).

The proportion of adults reporting inactivity was higher among females, compared with males. The prevalence of inactivity increased with increasing age and declined significantly as income and education increased (Table 13-1).

Figure 13-1. Prevalence of No Leisure Time Physical Activity in the Past Month, by Education, 2005, NH BRFSS

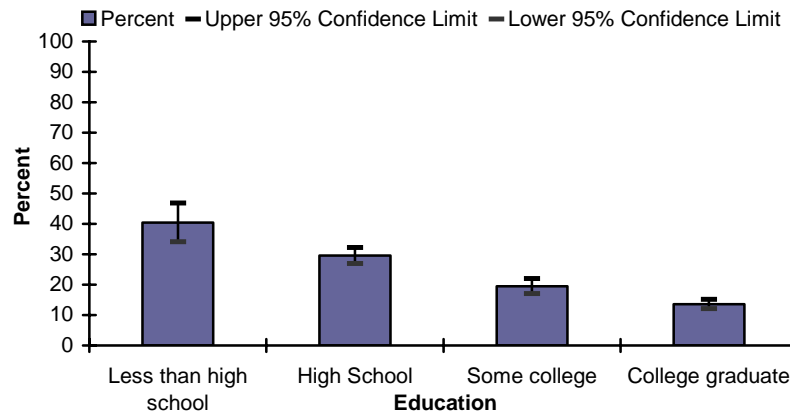


Table 13-1. Proportion of NH Adults Reporting No Leisure Time Physical Activity in the Previous Month, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,031	21.6	20.4-22.9
Sex			
Male	2,442	19.1	17.2-20.9
Female	3,589	24.0	22.3-25.7
Age			
18-24	234	18.5	12.6-24.4
25-34	756	15.8	12.8-18.7
35-44	1,189	20.1	17.5-22.7
45-54	1,369	20.6	18.1-23.1
55-64	1,102	25.8	22.8-28.8
65+	1,297	29.4	26.6-32.2
Education			
Less than H.S.	392	40.4	34.1-46.8
H.S. or G.E.D.	1,803	29.6	27.0-32.2
Some post-H.S.	1,474	19.5	17.1-22.0
College graduate	2,351	13.6	12.1-15.2
Household income			
Less than \$15,000	489	42.9	37.0-48.8
\$15,000- 24,999	707	33.8	29.4-38.2
\$25,000- 34,999	607	25.1	20.9-29.3
\$35,000- 49,999	848	23.5	19.9-27.2
\$50,000- 74,999	1,039	18.7	15.9-21.5
\$75,000+	1,541	11.8	10.0-13.6

The proportion of adults reporting no leisure time physical activity was significantly higher in 2005 compared with 2004.

Table 13-2. Proportion of NH Adults with No Leisure Time Physical Activity in the Previous 30 Days, by Year, 2001 – 2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,067	19.5	18.2 – 20.9
2002	5,038	19.9	18.7 – 21.2
2003	5,040	19.9	18.6 – 21.2
2004	5,057	18.5	17.3 – 19.7
2005	6,031	21.6	20.4 – 22.9

In 2005, the proportion of adults reporting no leisure time physical activity in the past 30 days was significantly higher in Coos County compared with the NH average (Table 13-3, Figure 13-2).

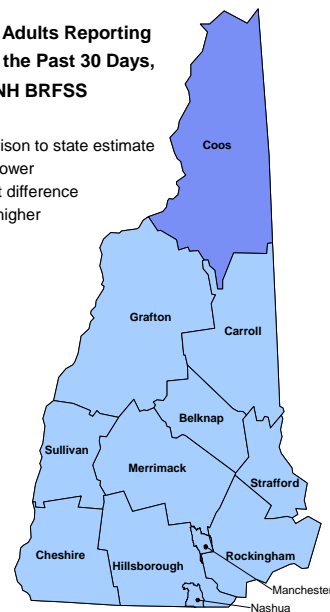
Table 13-3. Proportion of Adults Reporting No Leisure Time Physical Activity in the Past 30 Days, 2005 NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	357	18.9	14.5 - 23.2
Carroll	309	22.1	16.7 - 27.5
Cheshire	515	17.7	13.9 - 21.6
Coos	294	29.6	23.8 - 35.3
Grafton	502	17.6	13.9 - 21.3
Hillsborough	1,450	24.4	21.8 - 26.9
Merrimack	641	19.6	16.1 - 23.2
Rockingham	1,017	20.2	17.4 - 23.1
Strafford	622	23.7	19.7 - 27.7
Sullivan	324	20.9	15.8 - 26.0
Urban Areas			
Manchester	321	28.0	22.5 - 33.4
Nashua	265	26.1	19.9 - 32.3
New Hampshire	6,031	21.6	20.4 - 22.9

Figure 13-2.

Prevalence of Adults Reporting No Exercise in the Past 30 Days, 2005 NH BRFSS

Statistical comparison to state estimate
 □ Significantly lower
 □ No significant difference
 □ Significantly higher



In 2005, the BRFSS also asked a more detailed series of questions about physical activity. Based on responses to these questions, these measures of physical activity were calculated:

1. Moderate physical activity for 30 minutes or more, five or more days per week.
2. Vigorous physical activity for 20 or more minutes a day, three or more days per week.

Examples of moderate physical activities included: brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate.

Examples of vigorous physical activities included: running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate.

Figure 13-3 and Table 13-4 display the prevalence of reported levels of physical activity in 2005.

Figure 13-3. Percent of NH Adults Who Participated In Various Levels of Physical Activity, 2005 NH BRFSS

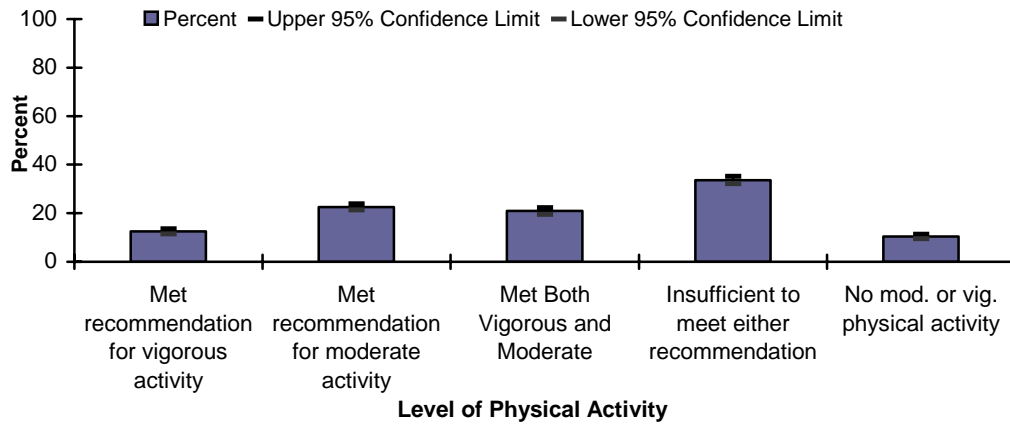


Table 13-4. Prevalence of Various Levels of Reported Physical Activity among Adults, 2005 NH BRFSS

<i>Physical Activity Level</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Meet recommendation for vigorous activity	653	12.5	11.5 – 13.6
Meet recommendation for moderate activity	1,368	22.5	21.3 – 23.8
Meet recommendation for both moderate and vigorous activity	1,054	20.9	19.5 – 22.3
Insufficient activity to meet recommendation for either	1,878	33.6	32.1 – 35.2
No moderate or vigorous physical activity	646	10.4	9.5 – 11.3

Fifty-six percent of adults reported they engaged in moderate or vigorous physical activity. The proportion of NH adults reporting they participated in moderate or vigorous physical activity declined significantly with age and was significantly lower among adults with less than a high school education compared with college graduates. The proportion of adults reporting moderate or vigorous physical activity increased significantly with increasing income (Figure 13-4, Table 13-5).

Figure 13-4. Proportion of Adults Reporting They Participated In Moderate or Vigorous Physical Activity, by Income, 2005 NH BRFSS

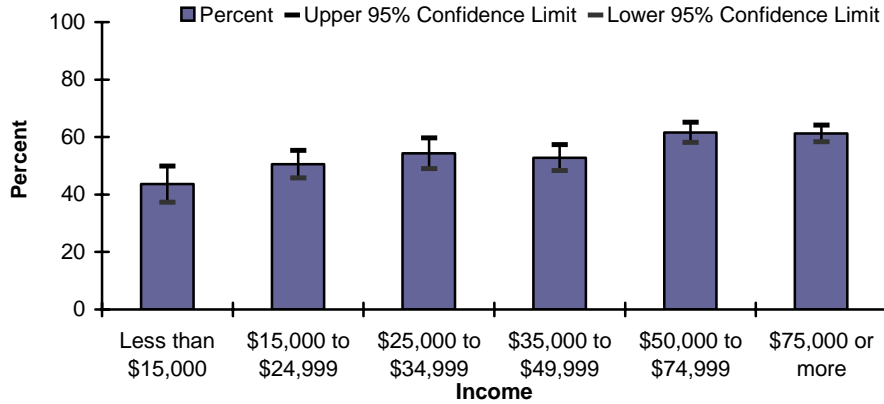


Table 13-5. Proportion of Adults Reporting Participating In Moderate or Vigorous Physical Activity, by Demographic Characteristics, 2005 NH BRFSS

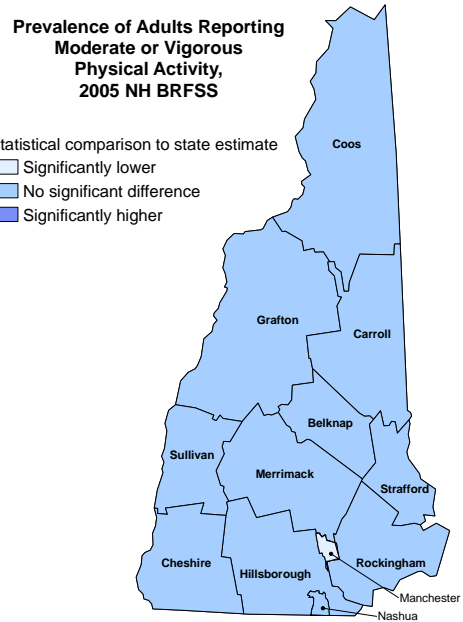
<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,599	56.0	54.4-57.6
Sex			
Male	2,287	57.2	54.8-59.7
Female	3,312	54.8	52.7-56.8
Age			
18-24	216	62.7	54.8-70.5
25-34	715	60.1	56.0-64.1
35-44	1,114	59.2	55.9-62.4
45-54	1,292	57.8	54.7-60.9
55-64	1,028	50.2	46.7-53.7
65+	1,164	46.1	42.9-49.4
Education			
Less than H.S.	345	48.7	41.7-55.8
H.S. or G.E.D.	1,638	53.5	50.5-56.6
Some post-H.S.	1,370	56.2	52.9-59.5
College graduate	2,238	58.8	56.4-61.3
Household income			
Less than \$15,000	445	43.6	37.3-49.9
\$15,000- 24,999	651	50.6	45.8-55.4
\$25,000- 34,999	572	54.3	49.0-59.7
\$35,000- 49,999	792	52.8	48.3-57.3
\$50,000- 74,999	985	61.6	58.1-65.1
\$75,000+	1,468	61.2	58.3-64.1

The proportion of adults reporting moderate or vigorous physical activity was significantly lower in Manchester compared with the NH average.

Table 13-6. Prevalence of Adults Reporting Moderate or Vigorous Physical Activity, 2005 NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	321	54.7	48.0 - 61.4
Carroll	283	62.7	56.2 - 69.3
Cheshire	484	61.0	56.0 - 66.0
Coos	272	54.9	48.3 - 61.5
Grafton	471	59.7	54.2 - 65.3
Hillsborough	1,347	51.4	48.3 - 54.5
Merrimack	607	56.9	52.2 - 61.7
Rockingham	944	57.2	53.4 - 61.0
Strafford	566	56.4	51.6 - 61.2
Sullivan	304	57.2	50.7 - 63.8
Urban Areas			
Manchester	295	47.2	40.6 - 53.9
Nashua	246	48.1	40.9 - 55.2
New Hampshire	5,599	56.0	54.4 - 57.6

Figure 13-5.



Healthy New Hampshire 2010 established an objective based on BRFSS data for increasing physical activity among NH adults.

However, the BRFSS questions measuring this objective and the methods for calculating the indicator changed substantially in 2001, following a modification of the national Healthy People 2010 indicators and targets. This change in questions makes it impossible to compare current BRFSS physical activity indicators to the 1998 baseline for the Healthy New Hampshire 2010 physical activity indicator.

A new target was set for the national HP2010 Objective 22.2 for 50% of adults to be engaging in moderate or vigorous physical activity by 2010.

In 2001, the most recent year the new BRFSS questions were used, 50.7% (95% CI: 48.9-52.6) of NH adults reported engaging in moderate physical activity for 30 or more minutes a day, five or more days per week or, in vigorous physical activity for 20 or more minutes per day, three or more days per week.

In 2005, 56.0% (95% CI: 54.4-57.6) of NH adults reported activity meeting this definition.

14. Fruit and Vegetable Consumption

A diet “rich in fruits and vegetables may reduce the risk of cancer and other chronic diseases.”¹⁹ The amount of fruit and vegetables required for a healthy diet varies by age, sex, and activity level. For example, for a 40-year-old woman who is moderately active, CDC recommends two cups of fruit and two and a half cups of vegetables every day, while for a man of the same age and activity level, the recommendation is for two cups of fruit and three and a half cups of vegetables each day.²⁰ The recommended amount of fruit and vegetables for men and women of different ages and activity levels can be found at the Fruits and Veggies Matter web page, www.fruitsandveggiesmatter.gov.

The Fruits and Veggies Matter program reports that most adults do not consume enough fruit and vegetables.²⁰

The 2005 BRFSS asked adults a series of questions regarding their fruit and vegetable consumption. In 2005, 29.1% of New Hampshire adults reported eating fruits and vegetables five or more times per day (Figure 14-1, Table 14-1).

Figure 14-1. Proportion of NH Adults Consuming Various Levels of Fruit and Vegetables, 2005 NH BRFSS

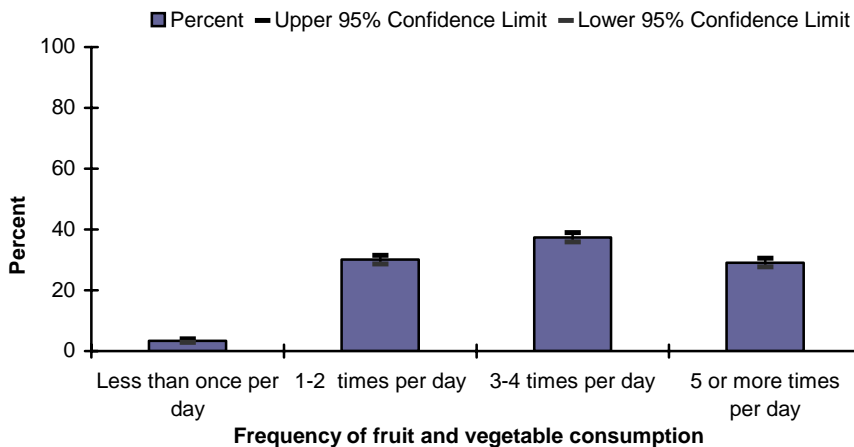


Table 14-1. Proportion of NH Adults Consuming Various Levels of Fruit and Vegetables, 2005 NH BRFSS

<i>Times per day fruit and vegetables were consumed</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Less than once a day	186	3.4	2.8-4.0
1 – 2 times a day	1,699	30.1	28.6-31.5
3 – 4 times a day	2,199	37.4	35.9-38.9
5 or more times a day	1,824	29.1	27.7-30.5

The proportion of women reporting they consumed fruit and vegetables five or more times a day was significantly higher compared with men. The proportion of adults aged 65 years or older reporting consumption of fruit and vegetables five or more times a day was significantly higher compared with younger adults (Table 14-2). The proportion of college graduates reporting consuming fruits and vegetables five or more times a day was significantly higher compared with other education levels.

Figure 14-2. Percentage of NH Adults Who Reported Eating Fruits and Vegetables Five or More Times a Day, By Education, 2005 NH BRFSS

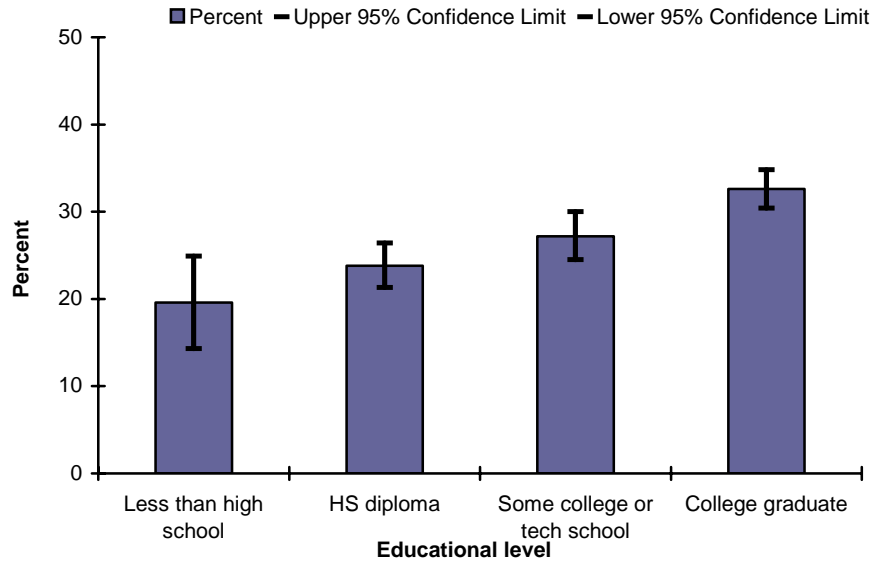


Table 14-2. Percentage of NH Adults Reporting Those Ate Fruit or Vegetables Five or More Times a Day, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,908	29.1	27.6-30.4
Sex			
Male	2,399	21.9	19.9-23.9
Female	3,509	33.4	31.5-35.3
Age			
18-24	226	26.3	19.6-33.0
25-34	738	23.9	20.4-27.3
35-44	1,157	24.5	21.8-27.2
45-54	1,350	27.6	24.9-30.3
55-64	1,083	28.9	25.8-31.9
65+	1,275	36.1	33.1-39.1
Education			
Less than H.S.	380	19.6	14.3-24.9
H.S. or G.E.D.	1,763	23.8	21.3-26.4
Some post-H.S.	1,439	27.2	24.5-30.0
College graduate	2,317	32.6	30.4-34.8
Household income			
Less than \$15,000	482	27.5	22.2-32.7
\$15,000- 24,999	691	24.8	20.9-28.8
\$25,000- 34,999	599	25.6	21.3-30.0
\$35,000-49,999	827	26.2	22.4-30.0
\$50,000- 74,999	1,024	27.3	24.1-30.4
\$75,000+	1,518	31.2	28.5-33.8

No significant differences were found in the proportion of adults reporting they ate fruit and vegetables five or more times a day by year for 2002, 2003 or 2005 (Table 14-3). These questions were not asked in 2001 or in 2004.

Table 14-3. Proportion of NH Adults Who Ate Fruits and Vegetables Five or More Times A Day, 2002, 2003, 2005, NH BRFSS

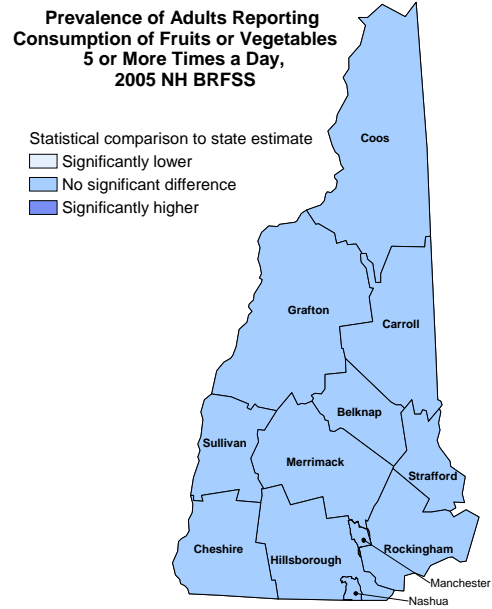
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	NA	NA	NA
2002	5,036	28.5	27.1 - 29.9
2003	5,040	28.5	27.1 - 29.9
2004	NA	NA	NA
2005	5,908	29.1	27.6-30.4

No significant differences were found in the proportion reporting consuming fruit or vegetables five or more times a day by region (Table 14-4).

Table 14-4. Prevalence of Adults Reporting Consumption of Fruits or Vegetables 5 or More Times a Day, 2005 NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	347	23.1	18.1 - 28.2
Carroll	301	29.8	24.0 - 35.6
Cheshire	505	31.8	27.4 - 36.3
Coos	290	28.4	22.5 - 34.4
Grafton	495	31.2	26.2 - 36.1
Hillsborough	1,425	27.3	24.7 - 30.0
Merrimack	633	28.6	24.5 - 32.7
Rockingham	986	30.1	26.7 - 33.4
Strafford	605	32.2	27.8 - 36.7
Sullivan	321	27.4	21.8 - 33.1
Urban Areas			
Manchester	312	27.3	21.7 - 32.9
Nashua	260	22.6	17.0 - 28.3
New Hampshire	5,908	29.1	27.6-30.4

Figure 14-3.



The “5-A-Day for Better Health” Program

For 15 years, the National Cancer Institute and the Produce for Better Health Foundation, along with other partners collaborated on the National 5-A-Day Partnership.²¹ The objective of the 5-A-Day Program was to increase fruit and vegetable consumption.²¹

NH adults were asked if they had heard of the 5-A-Day Program and those who had heard of 5-A-Day were asked if they knew the program focus. In 2005, 23.2% (95% CI: 21.9 – 24.6) had heard of the 5-A-Day program. This is a significant increase from 2002 when 18.6% (95% CI: 17.3 – 19.8) of NH adults reported they had heard of the program.²²

In 2005, 68.1% of adults who reported they had heard of the 5-A-Day program correctly identified the focus of the program as “fruits and vegetables.” (Table 14-5) This was a significant increase from 2002 when 60.8% (95% CI: 57.1 – 64.4) of adults identified the 5-A-Day focus as fruits and vegetables.²²

Table 14-5. Proportion of Adults Reporting Different Perceived Emphases of the 5-A-Day Program, among NH Adults Who Had Heard of the 5-A-Day Program, 2005 NH BRFSS

<i>Response</i>	<i>Sample Size</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
The 5 food groups	278	21.3	18.6 – 24.1
Fruits and vegetables	917	68.1	65.0 – 71.2
Weight control	39	3.1	1.9 – 4.4
Don't know/Not sure	104	7.4	5.7 – 9.1

Healthy New Hampshire 2010 established an objective related to fruit and vegetable consumption and set a target of half of NH adults consuming five or more servings of fruits and vegetables a day by 2010. The report found that a healthy diet contributes to a higher quality of life and helps reduce death and disability.⁶ The 2005 BRFSS found that 27.8% (95% CI: 26.4-29.2) of NH adults reported eating five or more servings of fruits and vegetables a day.



HNH2010 Objective: Increase the percentage of persons who consume five or more servings of fruits and vegetables daily.

Target	50% (Adults)
Baseline (1998)	28%
Current (2005)	28%



For more information about the New Hampshire Fruit and Vegetable Program:

Call 603-271-4551 (or in NH only, 1-800-852-3345, Ext. 4551) or visit

www.dhhs.state.nh.us/DHHS/NHP/fruitsandveggies.htm

For the National Fruit and Vegetable Program, visit:
www.fruitsandveggiesmatter.gov/

15. Immunization

The 2005 BRFSS asked adults about immunization against both influenza and pneumococcal disease.

Influenza Vaccination

Influenza or “the flu” is “a contagious respiratory illness” caused by a virus.²³ “It can cause mild to severe illness, and at times, can lead to death. The best way to prevent this illness is by getting a flu vaccination each year.”²³

The flu vaccine is recommended for most people who wish to avoid being sick from the flu. However, CDC recommends that some people, at higher risk for complications from the flu “make vaccination a priority” each year.²³ These include:²⁴

- Children aged 6 months to less than 5 years of age;
- Pregnant women;
- People 50 years of age and older;
- People of any age with certain chronic medical conditions,
- People of any age with certain chronic health conditions (such as asthma, diabetes or heart disease)
- People who live in nursing homes and other long-term care facilities;
- People who live with or care for those at high risk for complications from flu, including:
 - Household contacts of persons at high risk for complications from the flu (see above);
 - Household contacts and out-of-home caregivers of children less than six months of age (these children are too young to be vaccinated); and
 - Healthcare workers.

CDC recommends that some people should not be vaccinated without consulting their health care provider first. These include:²⁴

- People who have a severe allergy to chicken eggs;
- People who have had a severe reaction to an influenza vaccination in the past;
- People who developed Guillain-Barré syndrome (GBS) within six weeks of getting an influenza vaccine previously;
- Children less than six months of age and;
- People who have a moderate or severe illness with a fever should wait to get vaccinated until their symptoms lessen.

“There are two types of vaccines for the flu. The “flu shot”— an inactivated vaccine (containing killed virus) that is given with a needle, usually in the arm. The flu shot is approved for use in people older than 6 months, including healthy people and people with chronic medical conditions.”²⁴

The second type of influenza vaccine is the “nasal-spray” flu vaccine — a vaccine made with live, weakened flu viruses that do not cause the flu.” This vaccine is sometimes called LAIV and sometimes called FluMist™. LAIV (FluMist™) is approved for use in healthy people 2-49 years of age who are not pregnant. ²⁴

The 2005 BRFSS asked adults two questions regarding recent influenza vaccination. The first was “A flu shot is an influenza vaccine injected in your arm. During the past 12 months, have you had a flu shot?” The second was: “During the past 12 months, have you had a flu vaccine that was sprayed in your nose? The flu vaccine that is sprayed in the nose is also called FluMist™.”

The 2005 BRFSS also asked adults with children in their household to report on the flu immunization status of one randomly selected child.

Adult Influenza Vaccination

The 2005 BRFSS found that, overall, 29.2% of NH adults reported being vaccinated for influenza in the previous 12 months. This includes 29.1% of NH adults reporting they had a flu shot in the previous 12 months (95% CI: 27.7-30.4) and 0.7% reporting they had the flu vaccine that was sprayed into their nose, also called FluMist™.

Flu Shot Among Recommended Populations

CDC recommends adults aged 50 or older and those with certain chronic conditions receive the flu shot.²³

Among adults aged 50 years or older, 46.4% reported having a flu shot in the previous 12 months (Table 15-1). The proportion of adults aged 50 years or older reporting they received a flu shot in the past 12 months increased significantly with age (Figure 15-1, Tables 15-1). However, the proportion reporting having a flu shot in the past year declined significantly as income increased (Table 15-1).

Figure 15-1. Proportion of NH Adults Aged 50 Years or Older Receiving Flu Shot in the Previous 12 Months, by Age, 2005 NH BRFSS

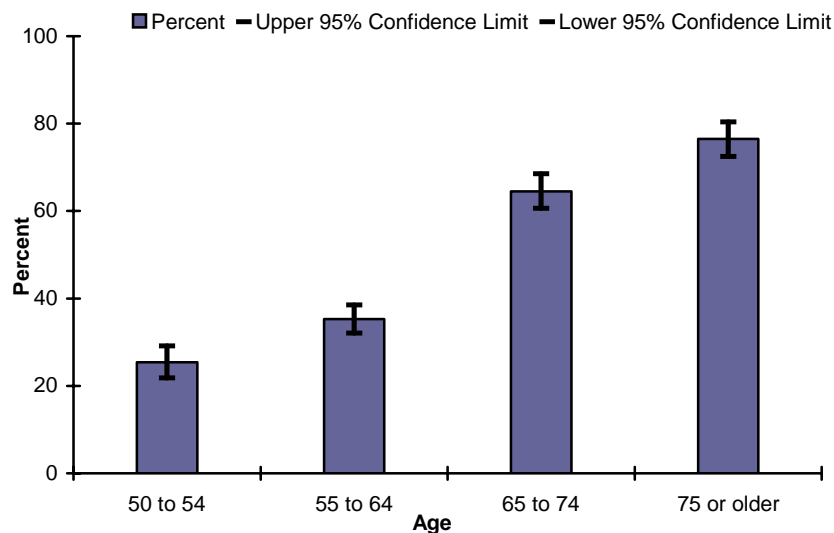


Table 15-1. Proportion of NH Adults Aged 50 Years Or Older Reporting They Had a Flu Shot in the Previous 12 Months, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	3,124	46.4	44.4 - 48.4
Sex			
Male	1,280	44.2	41.2 - 47.3
Female	1,844	48.4	45.8 - 51.0
Age			
50 to 54	728	25.4	21.8 - 29.1
55 to 64	1,103	35.3	32.1 - 38.5
65 to 74	726	64.5	60.6 - 68.5
75 or older	567	76.5	72.5 - 80.4
Education			
Less than H.S.	242	54.9	47.5 - 62.4
H.S. or G.E.D.	981	46.5	43.0 - 50.1
Some post-H.S.	723	45.8	41.6 - 50.0
College graduate	1,170	45.3	42.1 - 48.5
Household income			
Less than \$15,000	327	55.6	49.1 - 62.1
\$15,000- 24,999	443	57.9	52.6 - 63.3
\$25,000- 34,999	345	53.8	47.7 - 59.8
\$35,000-49,999	420	45.5	40.0 - 50.9
\$50,000- 74,999	468	38.6	33.6 - 43.5
\$75,000+	622	37.3	33.2 - 41.5

Among adults aged 18 years or older with chronic conditions, the proportion reporting they had a flu shot in the past 12 months varied from 66.7% among adults reporting diabetes to 41.6% among adults reporting a diagnosis of current asthma (Table 15-2).

Table 15-2. Proportion of Adults Aged 18 or Older Reporting They Received a Flu Shot in the Previous 12 Months and Reporting a Diagnosis of a Chronic Condition, Ages 18 or Older, 2005 NH BRFSS

<i>Chronic Condition</i>	<i>Sample size</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Diabetes	472	66.7	61.7 - 71.7
Current asthma	618	41.6	36.8 - 46.4
Stroke	192	63.5	55.3 - 71.6
Coronary Heart Disease or Angina	327	65.2	59.1 - 71.3
Myocardial Infarction or Heart Attack	279	60.5	53.4 - 67.6

Vaccination by LAIV or FluMist™

In 2003, a new method for administering flu vaccine was approved in the United States.²⁵ This method allows the flu vaccine to be sprayed into the nasal passages. In 2005, 0.7% of NH adults (95% CI: 0.5 - 0.9) reported receiving a flu vaccine that was sprayed in the nose. The 2005 sample size was too small to report prevalence of this vaccination type by demographic characteristics.

Childhood Influenza Vaccination

In 2005, the NH BRFSS asked adult respondents with a child under 18 years of age living in their household to report on whether a randomly selected child in the household had received a flu vaccine in the past 12 months. These questions provided an estimated proportion of NH children aged less than 18 years who had received a flu shot in the past year.

The questions asked were: “During the past 12 months, has the child had a flu shot? A flu shot is an influenza vaccine injected in his/her arm or thigh” and “In the past 12 months, has the child had an influenza vaccine sprayed in [his/her] nose? The influenza vaccine that is sprayed in the nose is FluMist™.”

Vaccination by LAIV or FluMist™

In 2005, 0.8% (95% CI: 0.3 – 1.2) of NH children had reportedly been vaccinated for the flu using this method. Sample sizes were too small to permit analysis by demographic characteristics.

Vaccination by Injection

In 2005, 20.0% of NH children under age 18 reportedly had a flu shot in the previous year (Table 15-3).

The prevalence of annual flu shots among NH children decreased as the child’s age increased (Table 15-3). No significant differences were found in the proportion of children receiving flu shots by the child’s gender or the household income.

Table 15-3. Prevalence of Flu Shot Among NH Children Under 18 Years, by Demographic Characteristics, 2005 NH BRFSS

Characteristic	Sample Size (n)	Percent	95% Confidence Interval
Total	1,846	20.0	17.8-22.1
Sex			
Male	964	20.1	17.2-23.1
Female	866	19.9	16.8-22.9
Age			
Less than six months to less than 5 years	433	37.1	31.8-42.3
5 years to less than 12 years	637	17.3	13.9-20.8
12 years to less than 18 years	661	12.8	9.9-15.8
Household Income			
Less than \$15,000	83	24.1	12.8-35.3
\$15,000- 24,999	155	18.6	10.7-26.5
\$25,000- 34,999	140	18.6	11.5-25.7
\$35,000- 49,999	254	20.5	14.8-26.1
\$50,000- 74,999	370	19.8	15.2-24.4
\$75,000+	687	18.9	15.6-22.2

Adult Pneumonia Vaccination

Pneumococcal disease is a bacterial infection that can cause fever, blood and brain infection (meningitis), and death.²⁶ CDC recommends that adults get the pneumococcal vaccine if they:

- Are 65 years old or older;
- Have a serious long-term health problem such as heart disease, sickle cell disease, alcoholism, leaks of cerebrospinal fluid, lung disease (not including asthma), diabetes, or liver cirrhosis;
- Their resistance to infection is lowered due to Hodgkin's Disease; multiple myeloma; cancer treatment with x-rays or drugs; treatment with long-term steroids; bone marrow or organ transplant; kidney failure; HIV/AIDS; lymphoma, leukemia, or other cancers; nephrotic syndrome; damaged spleen or no spleen; or
- They are an Alaskan Native or from certain Native American populations.

The BRFSS asked adults whether they had ever received a pneumonia shot. In 2005, 23.0% (95% CI: 21.7-24.3) of NH adults aged 18 or older reported they had received a pneumonia shot at some time (Table 15-4).

Among NH adults aged 65 or older, 69.8% reported receiving a pneumonia shot. There were no significant differences by demographic characteristics in the proportion of NH adults aged 65 or older reporting a pneumonia shot (Table 15-4).

Table 15-4. Proportion of NH Adults Aged 65 Years or Older Reporting Receiving a Pneumonia Shot, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	1,249	69.8	66.8 - 72.7
Sex			
Male	467	68.0	63.2 - 72.8
Female	782	71.0	67.3 - 74.8
Education			
H.S. or G.E.D. or Less	582	67.3	62.8 - 71.8
Some post-H.S.	252	73.7	67.3 - 80.1
College graduate	413	70.4	65.4 - 75.4
Household income			
Less than \$15,000	186	71.6	64.0 - 79.1
\$15,000- 24,999	258	67.4	60.1 - 74.6
\$25,000- 34,999	151	69.3	61.0 - 77.5
\$35,000-49,999	159	72.4	64.5 - 80.3
\$50,000- 74,999	102	73.8	64.2 - 83.3
\$75,000+	125	63.6	54.1 - 73.0

Among adults aged 18 years or older with chronic conditions, the proportion reporting a pneumonia shot in the past 12 months varied from 64.5% among adults reporting a diagnosis of myocardial infarction to 60.9% among adults reporting a diagnosis of stroke (Table 15-5).

Table 15-5. Proportion of NH Adults Reporting Receiving a Pneumonia Shot, by Chronic Condition Diagnosis, 2005 NH BRFSS

<i>Chronic Condition</i>	<i>Sample size</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Diabetes	448	62.0	56.5 - 67.4
Stroke	179	60.9	52.0 - 69.7
Coronary Heart Disease or Angina	313	61.9	55.4 - 68.3
Myocardial Infarction or Heart Attack	263	64.5	57.7 - 71.3

Healthy New Hampshire 2010 called the “decline in vaccine preventable disease one of the most significant public health accomplishments of the 20th century”.⁶ The report used BRFSS data to set the baseline for two objectives related to immunization.

In 2005, the BRFSS found that 46% (95% CI: 44 - 48) of NH adults aged 50 years and older had been vaccinated against influenza in the previous month.



HNH2010 Objective: Increase the percentage of independently living adults, age 50 or over, who report having been vaccinated against influenza in the last 12 months.

<i>Target</i>	80%
<i>Baseline (1997)</i>	46%
<i>Current (2005)</i>	46%

The second objective focused on increasing the proportion of older adults vaccinated against pneumococcal disease. In 2005, the BRFSS found that 70% (95% CI: 67 – 73) of NH adults aged 65 years and older reported being vaccinated against pneumococcal disease.



HNH2010 Objective: Increase the percentage of independently living adults, age 65 or over, who report ever having been vaccinated against pneumococcal disease.

<i>Target</i>	90%
<i>Baseline (1997)</i>	60%
<i>Current (2005)</i>	70%

For more information about preventing the flu or about pneumonia shots, visit the Centers for Disease Control and Prevention web pages at:

www.cdc.gov/flu/ or
www.cdc.gov/vaccines/

or, contact the
NH DHHS Immunization Program at:

www.dhhs.nh.gov/DHHS/IMMUNIZATION/

16. Cholesterol Screening

Cholesterol is a substance made by the body and found in some foods. Cholesterol can contribute to the narrowing of blood vessels associated with heart disease.²⁷ Too much cholesterol in the body can increase the risk of heart disease.²⁷ Screening tests are available to detect elevated cholesterol levels, which can be treated by dietary changes and by medications.²⁷

The 2005 BRFSS asked adults if they had ever had their blood cholesterol checked, about how long it had been since they last had their cholesterol checked and, if they had ever been told by a doctor, nurse or other health professional that their blood cholesterol was high.

In 2005, 84.8% of adults reported a cholesterol test at some time and 81% reported they had their cholesterol checked in the past five years (Table 16-1).

The proportion of adults reporting they had their cholesterol checked in the past five years increased with increasing age and level of education (Figure 16-1, Table 16-1). The proportion of adults reporting they had their cholesterol checked in the past five years was significantly higher among those incomes of \$75,000 or more compared with those with lower incomes (Table 16-1).

Figure 16-1. Proportion of NH Adults Reporting They Had a Cholesterol Test in the Past Five Years, by Education, 2005 NH BRFSS

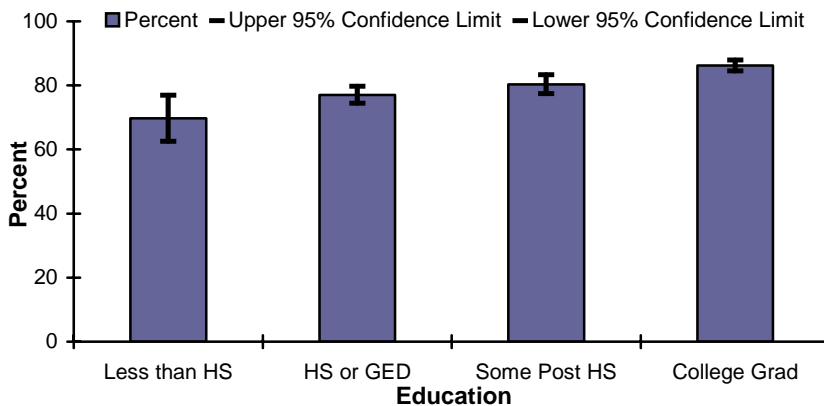


Table 16-1. Proportion of NH Adults Having Their Cholesterol Checked in the Past Five Years, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,878	81.0	79.6-82.4
Sex			
Male	2,387	79.4	77.1-81.6
Female	3,491	82.6	80.9-84.2
Age			
18-24	205	44.5	36.3-52.7
25-34	730	68.1	64.3-71.9
35-44	1,169	79.9	77.3-82.5
45-54	1,356	90.2	88.5-91.9
55-64	1,086	92.1	90.4-93.8
65+	1,252	94.4	93.0-95.7
Education			
Less than H.S.	368	69.7	62.5-76.9
H.S. or G.E.D.	1,750	77.0	74.4-79.7
Some post-H.S.	1,445	80.3	77.4-83.3
College graduate	2,306	86.2	84.5-87.9
Household income			
Less than \$15,000	469	76.5	70.8-82.2
\$15,000- 24,999	688	79.8	76.0-83.7
\$25,000- 34,999	590	75.3	70.2-80.4
\$35,000- 49,999	835	78.1	74.2-82.0
\$50,000- 74,999	1,024	80.4	77.3-83.5
\$75,000+	1,519	86.8	84.6-89.1

There was a significant increase in the proportion of NH adults reporting five-year cholesterol testing between 2001 and 2005 (Table 16-2). This question was not asked in 2002 or 2004.

Table 16-2. Proportion of NH Adults Reporting Testing for Cholesterol in the Past Five Years, by Year, 2001, 2003, 2005 NH BRFSS

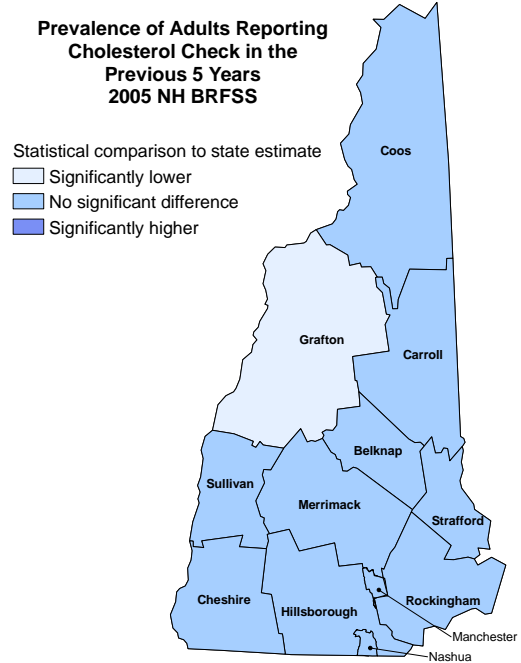
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	3,946	77.2	75.7-78.7
2002	NA	NA	NA
2003	4,920	79.7	78.3-81.1
2004	NA	NA	NA
2005	5,878	81.0	79.6-82.4

In 2005, the proportion of adults reporting they had their cholesterol checked in the previous five years was significantly lower in Grafton County compared with the NH average.

Table 16-3. Prevalence of Adults Reporting a Cholesterol Check in the Previous 5 Years, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	356	75.6	69.2 - 81.9
Carroll	306	73.9	67.9 - 79.9
Cheshire	498	77.2	72.6 - 81.7
Coos	283	75.0	69.1 - 80.9
Grafton	488	73.8	68.5 - 79.1
Hillsborough	1,410	82.6	80.0 - 85.1
Merrimack	618	83.7	80.0 - 87.3
Rockingham	998	84.0	80.8 - 87.2
Strafford	609	82.3	78.5 - 86.1
Sullivan	312	82.4	77.0 - 87.8
Urban Areas			
Manchester	311	81.7	76.5 - 87.0
Nashua	258	77.6	71.3 - 83.9
New Hampshire	5,878	81.0	79.6 - 82.4

Figure 16-2.



Among NH adults who had been tested for cholesterol, 36.4% reported they had, at some time, been told their cholesterol was high by a doctor, nurse, or other health professional.

The proportion of males reporting they had ever been told their cholesterol was high was significantly higher compared with females.

The proportion of respondents reporting ever being told their cholesterol was high increased significantly with increasing age (Figure 16-3) and declined significantly with increasing levels of education and income (Table 16-4).

Figure 16-3. Proportion of NH Adults Ever Told They Had High Cholesterol, by Age, 2005 NH BRFSS

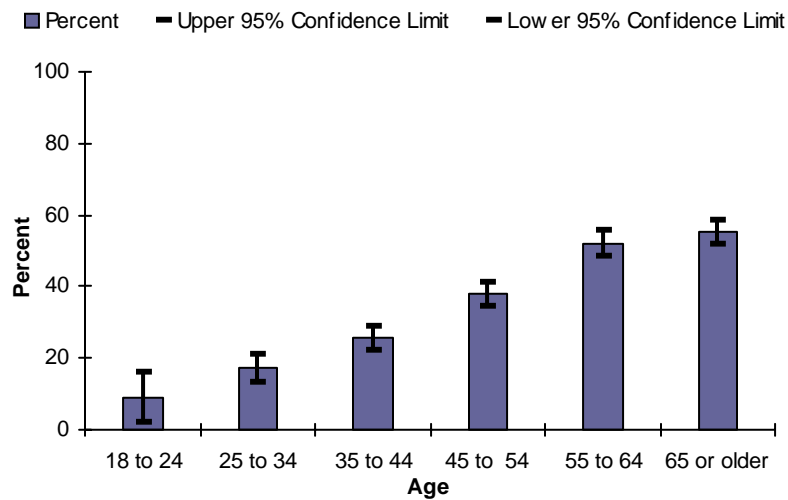


Table 16-4. Proportion of NH Adults Reporting They Were Ever Told They Had High Cholesterol, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	4,923	36.4	34.9-38.0
Sex			
Male	1,970	38.6	36.1-41.1
Female	2,953	34.4	32.5-36.4
Age			
18-24	99	9.2	2.36-16.1
25-34	485	17.2	13.2-21.1
35-44	924	25.6	22.4-28.8
45-54	1,202	37.8	34.6-41.1
55-64	983	52.2	48.7-55.8
65+	1,160	55.4	52.1-58.6
Education			
Less than H.S.	291	50.4	43.4-57.4
H.S. or G.E.D.	1,411	38.3	35.3-41.3
Some post-H.S.	1,207	34.6	31.4-37.7
College graduate	2,005	34.3	31.9-36.8
Household income			
Less than \$15,000	378	47.3	40.7-53.9
\$15,000- 24,999	556	46.3	41.2-51.5
\$25,000- 34,999	473	37.6	32.3-42.9
\$35,000- 49,999	688	36.2	31.9-40.5
\$50,000- 74,999	851	31.5	28.0-35.0
\$75,000+	1,346	32.6	29.8-35.4

There was a significant increase in the proportion of NH adults reporting they had ever been told they had high cholesterol between 2001 and 2005. These questions were not asked in 2002 or 2004.

Table 16-5. Proportion of NH Adults Ever Told They Had High Cholesterol, among NH Adults Who Have Ever Been Tested, 2001, 2003, 2005, NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	3,341	31.0	29.3-32.8
2002	NA	NA	NA
2003	4,054	34.2	32.6-35.8
2004	NA	NA	NA
2005	4,923	36.4	34.9-38.0

Healthy New Hampshire 2010 established an objective for increasing the percentage of NH adults screened for cholesterol in the previous five years. The report found that “lifestyle changes, coupled with dietary and drug therapy, can reduce heart disease and stroke risk factors”.⁶ It further concluded that some factors associated with heart disease could be modified. These include:

- high blood pressure;
- cigarette smoking;
- high blood cholesterol;
- obesity;
- physical inactivity and;
- diabetes.⁶

In 2005, 81% (95% CI: 79.6 - 82.4) of NH adults reported they had been tested for cholesterol in the previous five years.



HNH2010 Objective: Increase the percentage of adults who report having had their blood cholesterol checked within the last five years.

<i>Target</i>	80%
Baseline (1998)	74%
Current (2005)	81%

For more information on cholesterol and preventing heart disease, visit the American Heart Association’s web site:
<http://www.americanheart.org/>

or see the NH DHHS, Nutrition and Health Promotion Program’s chronic disease fact sheets at:

www.dhhs.nh.gov/DHHS/NHP/LIBRARY/Fact+Sheet/healthylifestyles-disease.htm

17. High Blood Pressure

Hypertension or “high blood pressure” increases the risk of heart disease and stroke²⁸, the first and third leading causes of death among NH residents.²⁹ High blood pressure also increases the risk of kidney disease. High blood pressure is defined as having a systolic blood pressure of 140 mm Hg or higher, or a diastolic blood pressure of 90 mm Hg or higher, measured on two or more occasions.³⁰ Prehypertension is defined as a systolic blood pressure of more than 120 mm Hg or a diastolic blood pressure of 80 mm Hg or more.³⁰

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC 7) recommends treatment for all people with hypertension and lifestyle changes, including weight loss, dietary changes and exercise, for people with prehypertension.³⁰ The JNC 7 recommends treatment for individuals with prehypertension and diabetes or kidney disease who cannot reduce their blood pressure with lifestyle changes.³⁰

In 2005, 23.3% of NH adults reported being told at some time by a doctor, or other health professional, that they had high blood pressure. Among NH adults reporting high blood pressure, 77.9% (95% CI: 75.4-80.4) reported they were currently taking medicine for high blood pressure.

The prevalence of reported high blood pressure increased significantly with age (Figure 17-1) and declined significantly with educational level and income (Table 17-1).

Figure 17-1. Proportion Of NH Adults Ever Told They Had High Blood Pressure, by Age, 2005 NH BRFSS.

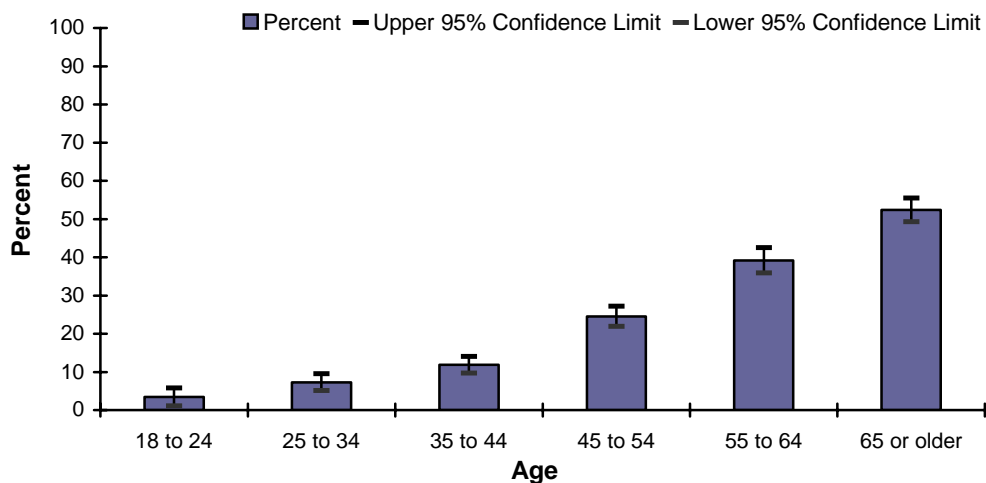


Table 17-1. Proportion of NH Adults Ever Told They Had High Blood Pressure, by Demographic Characteristics, 2005 NH BRFSS.

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,026	23.3	22.0-24.5
Sex			
Male	2,437	24.8	22.9-26.7
Female	3,589	21.8	20.3-23.3
Age			
18-24	233	3.4	1.1-5.8
25-34	758	7.3	5.1-9.5
35-44	1,189	11.9	9.7-14.1
45-54	1,369	24.5	21.9-27.2
55-64	1,102	39.2	35.9-42.5
65+	1,291	52.4	49.3-55.5
Education			
Less than H.S.	390	34.2	28.4-40.0
H.S. or G.E.D.	1,802	25.4	23.1-27.7
Some post-H.S.	1,474	23.4	20.9-26.0
College graduate	2,350	19.6	17.8-21.4
Household income			
Less than \$15,000	488	41.1	35.4-46.8
\$15,000- 24,999	706	32.7	28.6-36.8
\$25,000- 34,999	607	24.4	20.5-28.4
\$35,000- 49,999	849	18.8	16.0-21.7
\$50,000- 74,999	1,038	21.5	18.7-24.4
\$75,000+	1,541	18.7	16.5-20.8

No significant differences were found in the prevalence of reported high blood pressure among NH adults for the years 2001, 2003, or 2005 (Table 17-2). This question was not asked in 2002 or 2004.

Table 17-2. Proportion of NH Adults Told They Had High Blood Pressure, by Year, 2001, 2003, 2005, NH BRFSS

Year	Total Number of Respondents for the Year Indicated	Percent	95% Confidence Interval
2001	4,061	22.8	21.4-24.3
2002	NA	NA	NA
2003	5,030	22.5	21.3-23.8
2004	NA	NA	NA

No significant differences were found by region in the proportion of adults reporting high blood pressure compared with the state average (Table 17-3, Figure 17-2).

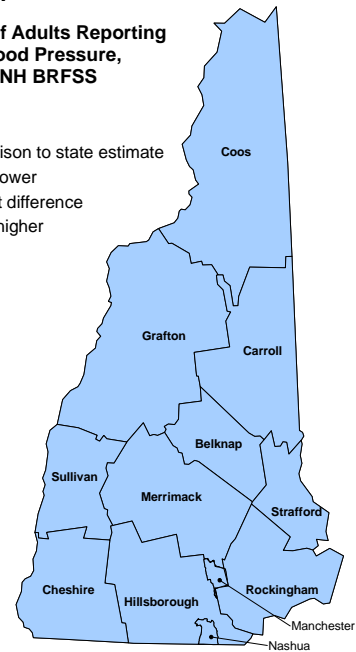
Table 17-3. Prevalence Of Adults Reporting High Blood Pressure, by Region, 2005 NH BRFSS

Region	Sample size (N)	Percent	95% Confidence Interval
Counties			
Belknap	358	25.5	20.6 - 30.3
Carroll	309	26.0	20.5 - 31.6
Cheshire	514	23.3	19.4 - 27.3
Coos	294	26.7	21.2 - 32.2
Grafton	502	21.9	17.9 - 25.9
Hillsborough	1,445	22.4	19.9 - 24.8
Merrimack	641	25.4	21.6 - 29.2
Rockingham	1,014	22.1	19.4 - 24.9
Strafford	624	26.0	22.0 - 30.0
Sullivan	325	23.7	18.7 - 28.8
Urban Areas			
Manchester	320	24.5	19.1 - 29.9
Nashua	263	24.2	18.5 - 29.9
New Hampshire	6,026	23.3	22.1 - 24.5

Figure 17-2.

Prevalence of Adults Reporting High Blood Pressure, 2005 NH BRFSS

Statistical comparison to state estimate
 □ Significantly lower
 □ No significant difference
 □ Significantly higher



For more information on cholesterol and preventing heart disease, visit the
American Heart Association's web site:
<http://www.americanheart.org/>

or see the NH DHHS, Nutrition and Health Promotion Program's chronic
disease fact sheets at:

[www.dhhs.nh.gov/DHHS/NHP/LIBRARY/Fact+Sheet/healthylifestyles-
disease.htm](http://www.dhhs.nh.gov/DHHS/NHP/LIBRARY/Fact+Sheet/healthylifestyles-disease.htm)

Chronic Conditions

18. Arthritis

Arthritis includes more than 100 diseases and conditions that affect joints, the tissues surrounding the joints and other connective tissue. Common symptoms include pain, aching, stiffness, and swelling in or around the joints. Certain rheumatic conditions can also involve the immune system and various internal organs of the body.³¹

In 2003, approximately 46,000 working-age NH adults reported that arthritis or joint symptoms affected whether they worked or the type or amount of work they did.³² Direct medical costs due to arthritis in NH were approximately \$360 million, while indirect costs, including lost earnings, totaled approximately \$213 million.³³

CDC reports that evidence-based interventions exist that can improve functioning for people with arthritis, leading to a better quality of life and improving the health of the work force.³¹

In 2005, the BRFSS asked adults a series of questions about arthritis. In NH, 26.9% of adults (95% CI: 25.6-28.2) said they had been diagnosed with some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. Of those reporting a diagnosis of arthritis, 32.9% (95%CI: 30.5 – 35.4) reported they were limited in their usual activities because of arthritis or joint symptoms.

Women were significantly more likely to report a diagnosis of arthritis than men. The prevalence of reported arthritis increased with increasing age and declined with increasing levels of education and income (Figure 18-1, Table 18-1).

Figure 18-1. Proportion of NH Adults Diagnosed with Some Type of Arthritis, by Income, 2005 NH BRFSS

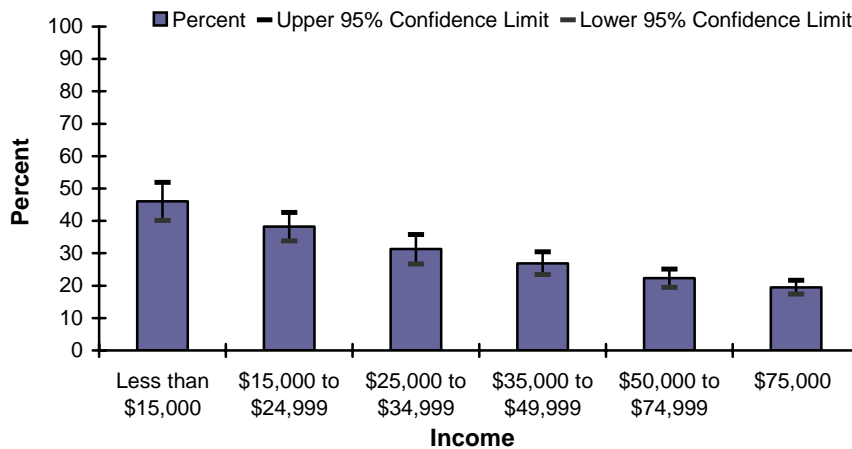


Table 18-1. Proportion of NH Adults Who Reported Being Diagnosed With Some Form of Arthritis, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,935	26.9	25.6-28.2
Sex			
Male	2,412	22.7	20.8-24.5
Female	3,523	30.9	29.1-32.7
Age			
18-24	229	4.9	1.98-7.78
25-34	745	10.9	8.23-13.6
35-44	1,161	16.0	13.7-18.4
45-54	1,352	28.3	25.6-31.0
55-64	1,090	45.5	42.1-48.9
65+	1,276	53.3	50.2-56.5
Education			
Less than H.S.	386	38.9	32.8-45.0
H.S. or G.E.D.	1,770	31.9	29.3-34.4
Some post-H.S.	1,448	25.4	22.8-27.9
College graduate	2,321	22.0	20.2-23.9
Household income			
Less than \$15,000	480	46.0	40.1-51.9
\$15,000- 24,999	696	38.2	33.8-42.6
\$25,000- 34,999	598	31.3	26.7-35.8
\$35,000- 49,999	834	26.9	23.4-30.4
\$50,000- 74,999	1,032	22.3	19.5-25.1
\$75,000+	1,521	19.5	17.4-21.6

No significant difference was found in the prevalence of reported arthritis for the years 2003 and 2004 (Table 18-2).

Table 18-2. Proportion of NH Adults Who Reported a Diagnosis of Arthritis, 2003 and 2005 NH BRFSS

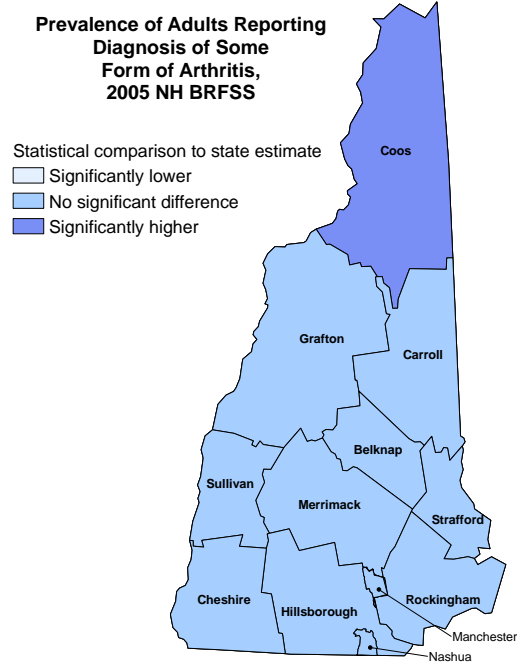
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2003	4,981	26.4	25.1-27.8
2004	NA	NA	NA
2005	5,935	26.9	25.6-28.2

In 2005, a significantly higher proportion of adults residing in Coos County reported a diagnosis of some form of arthritis compared with the NH average.

Table 18-3. Prevalence of Adults Reporting a Diagnosis of Some Form of Arthritis, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	348	28.8	23.5 - 34.1
Carroll	302	30.3	24.5 - 36.1
Cheshire	510	24.8	20.7 - 28.8
Coos	291	34.8	28.9 - 40.8
Grafton	499	26.7	22.3 - 31.1
Hillsborough	1,427	26.3	23.7 - 28.9
Merrimack	631	29.7	25.6 - 33.7
Rockingham	996	25.5	22.5 - 28.4
Strafford	611	27.9	23.9 - 31.8
Sullivan	320	30.4	24.8 - 36.0
Urban Areas			
Manchester	313	30.8	25.0 - 36.6
Nashua	261	27.7	21.6 - 33.8
New Hampshire	5,935	26.9	25.6 - 28.2

Figure 18.



19. Asthma

The National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health (NIH) defined asthma as a chronic inflammatory disorder of the airways that causes episodes of wheezing, breathlessness, chest tightness, and coughing...³⁴ The severity of asthma episodes can range from mild to life-threatening.³⁴ Asthma is the most common chronic condition of childhood; an estimated three-quarters of children with asthma will experience at least episodic asthma as adults.³⁴

Asthma symptoms vary from person to person, however, with proper treatment most people with asthma can expect to have few or no symptoms. Asthma can be managed and symptoms reduced with medication and by reducing exposure to triggers, including dust mites, cockroaches, animal dander, mold, pollen, stress, and tobacco smoke.³⁴

Adult Asthma

In 2005, 14.7% (95% CI: 13.6-15.8) of New Hampshire adults had been told at some time in their life that they had asthma (lifetime asthma) and 10.3% of adults reported they currently had asthma (current asthma) (Table 19-1).

Women were significantly more likely to report current asthma compared with men (Figure 19-1). The prevalence of reported current asthma decreased with increasing levels of education and income (Table 19-1).

Figure 19-1. Proportion of NH Adults Reporting They Currently Have Asthma by Gender, 2005 NH BRFSS

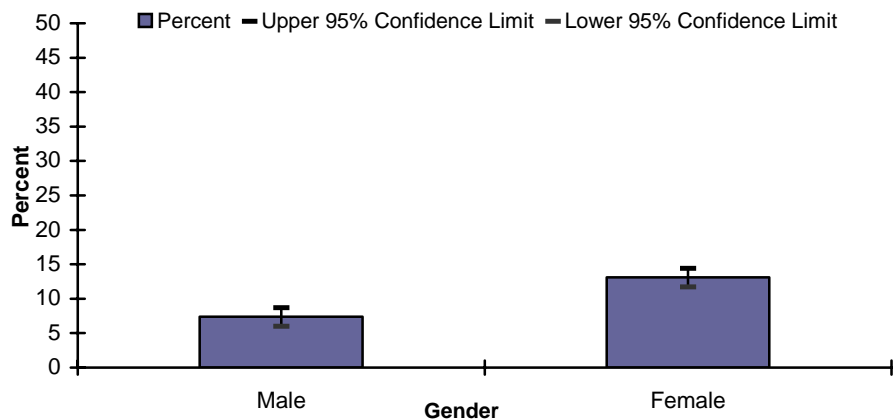


Table 19-1. Adults Reporting They Currently Have Asthma, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,999	10.3	9.3-11.3
Sex			
Male	2,436	7.4	6.0-8.7
Female	3,563	13.1	11.7-14.4
Age			
18-24	232	14.9	9.6-20.2
25-34	751	10.9	8.5-13.4
35-44	1,183	10.0	8.1-11.8
45-54	1,367	10.1	8.3-11.9
55-64	1,092	9.4	7.4-11.5
65+	1,290	8.1	6.3-9.9
Education			
Less than H.S.	386	16.7	12.0-21.4
H.S. or G.E.D.	1,801	10.3	8.5-12.0
Some post-H.S.	1,464	12.0	9.9-14.2
College graduate	2,337	8.0	6.8-9.3
Household income			
Less than \$15,000	484	19.1	14.2-24.0
\$15,000- 24,999	702	13.7	10.5-16.9
\$25,000- 34,999	606	9.5	6.9-12.2
\$35,000- 49,999	843	10.9	8.3-13.6
\$50,000- 74,999	1,033	8.7	6.8-10.6

There was no significant change in the proportion of adults reporting a diagnosis of current asthma between 2001 and 2005. (Table 19-2)

Table 19-2. Proportion of NH Adults Who Currently Have Asthma, by Year, 2001-2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,051	8.4	7.4-9.4
2002	5,024	8.7	7.8-9.6
2003	5,014	8.5	7.6-9.4
2004	5,041	10.3	9.3-11.3
2005	5,999	10.3	9.3-11.3

No significant differences were found in the state and county proportions of adults reporting ever having a diagnosis of current asthma (Table 19-3, Figure 19-2).

Table 19-3. Prevalence of Adults Reporting a Diagnosis Current Asthma, 2005, NH BRFSS

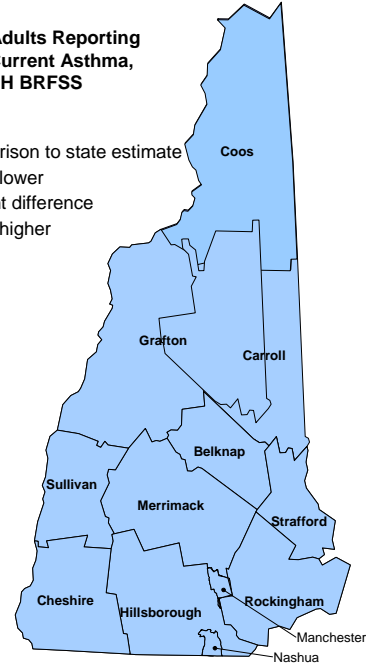
<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	356	10.0	5.9 - 14.1
Carroll	305	9.3	5.5 - 13.2
Cheshire	512	8.4	5.6 - 11.1
Coos	291	15.2	10.5 - 19.8
Grafton	498	12.3	8.1 - 16.6
Hillsborough	1,445	11.4	9.4 - 13.3
Merrimack	639	10.5	7.7 - 13.3
Rockingham	1,010	8.3	6.4 - 10.1
Strafford	620	11.2	8.1 - 14.3
Sullivan	323	10.1	6.5 - 13.7
Urban Areas			
Manchester	319	12.0	8.0 - 16.0
Nashua	265	16.0	10.7 - 21.4
New Hampshire	5,999	10.3	9.3-11.3

Figure 19-2.

Prevalence of Adults Reporting Diagnosis of Current Asthma, 2005 NH BRFSS

Statistical comparison to state estimate

- Significantly lower
- No significant difference
- Significantly higher



Occupational Asthma

The Occupational Safety and Health Administration (OSHA) reports that, in the U.S., an estimated 11 million workers are “exposed to at least one of the numerous agents known to be associated with occupational asthma”.³⁵ “Occupational asthma refers to asthma that is caused by breathing in specific agents in the workplace.”³⁶

The American Thoracic Society estimated that approximately 15% of all adult asthma cases are attributable to occupational factors.³⁷

In 2005, questions were added to the NH BRFSS asking if respondents had ever been told by a health professional that their asthma was related to any job they ever had or had ever told a health care professional their asthma was related to their work.

Among NH adults who reported they had a diagnosis of asthma at some time in their life, 6.5% had either been told by a doctor or told a doctor their asthma was related to their job (Table 19-4).

Table 19-4. Proportion of Adults Ever Diagnosed with Asthma and Reporting Work-Related Asthma, 2005 NH BRFSS (N=875)

<i>Work related asthma question</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Respondent told by doctor they had work-related asthma	5.1	3.3 - 6.8
Respondent ever told a doctor they had work-related asthma	4.7	3.1 - 6.2
Yes to either question	6.5	4.6 - 8.5

For more information on work-related asthma in NH, go to *Asthma in New Hampshire, Work-Related Asthma*, Data Brief Vol.2 No.1 at www.asthmanow.net/WRA%20Brief.pdf.

Childhood Asthma

In 2005, the NH BRFSS asked adult respondents with children under 18 years of age living in their household to report on the asthma status of a randomly selected child in the household. This allowed the estimation of the prevalence of asthma among NH children less than 18 years of age.

In 2005, 15% of NH children had reportedly been diagnosed with asthma during their lifetime (lifetime asthma) (Table 19-5). The prevalence of lifetime asthma among NH children was significantly higher for children aged five years or older compared with younger children (Table 19-5). There was no significant difference by gender of the child or by household income (Table 19-5).

Table 19-5. Prevalence of Lifetime Asthma among NH Children, by Demographic Characteristics, 2005 NH BRFSS.

<i>Characteristic</i>	Lifetime asthma, child n=1921		Current asthma, child n=1909	
	Percent	95% Confidence Interval	Percent	95% Confidence Interval
Total	15.1	13.1-17.0	10.67	8.9 - 12.4
Gender				
Boys	15.9	13.2-18.7	11.14	8.8 - 13.5
Girls	14.2	11.5-17.0	10.22	7.9 - 12.6
Age				
Less than six months to less than 5 years	9.0	5.9-12.2	6.69	3.9 - 9.4
5 years to less than 12 years	16.3	12.9-19.6	12.35	9.2 - 15.5
12 years to less than 18 years	18.1	14.7-21.4	11.45	8.7 - 14.2
Household income				
Less than 24,999	21.2	14.7-27.6	15.84	10 - 21.7
\$25,000- 34,999	14.2	7.8-20.7	9.31	4.2 - 14.4
\$35,000- 49,999	13.6	8.7-18.5	11.13	6.6 - 15.6
\$50,000- 74,999	15.0	10.6-19.3	9.16	5.8 - 12.5
\$75,000+	12.5	9.6-15.5	8.8	6.3 - 11.4

For more information about asthma, contact the NH Asthma Control Program at:
 603-271-0855 or 1-800-852-3345 Ext. 0855 (in NH)
www.asthmanow.net/
 Or
 The National Heart, Blood, and Lung Institute Information Center
 at 301-251-1222, www.nhlbi.nih.gov

20. Cardiovascular Disease

Cardiovascular Disease (CVD) is the leading cause of death among adults in the U.S. and in NH. Approximately 2,800 NH residents die from heart disease each year.³⁸ Nationally, in 2006, costs due to heart disease were projected to be \$258 billion, including health care services, medications, and lost productivity.^{2839, 40}

Some conditions and certain behaviors can increase the chance of developing heart disease. These include³⁹:

- High cholesterol
- High blood pressure
- Diabetes
- Obesity
- Tobacco use
- Diet high in saturated fat, cholesterol and sodium
- Physical inactivity
- Excessive alcohol use
- Genetic factors

A myocardial infarction or heart attack happens when blood supply to the heart is reduced and the heart does not receive enough oxygen causing damage.³⁹ This can result in irregular heart beat, or stopping of the heart, leading to death. Coronary artery disease is the chief cause of a heart attack. Symptoms of a heart attack include³⁹:

- Chest discomfort. Most heart attacks involve discomfort in the center of the chest that lasts for more than a few minutes, or goes away and comes back. The discomfort can feel like uncomfortable pressure, squeezing, fullness, or pain.
- Discomfort in other areas of the upper body. This can include pain or discomfort in one or both arms, the back, neck, jaw, or stomach.
- Shortness of breath. This often comes along with chest discomfort. But it also can occur before chest discomfort.
- Other symptoms. These may include breaking out in a cold sweat or feeling nausea or light-headedness.

Immediate action to get medical attention increases the chance of surviving a heart attack.³⁹

Coronary Heart Disease (CHD) is the most common type of heart disease.³⁹ CHD occurs “when the blood vessels that supply blood to the heart muscle become hardened and narrowed by the buildup of fatty substances including cholesterol and other lipids.”³⁹ As a result, blood flow and oxygen supply to the heart can be reduced or blocked.²⁷

CHD can lead to chest pain (angina), irregular heart beat, heart attack (MI), or heart failure.²⁷

“A stroke occurs when the blood supply to part of the brain is blocked or when a blood vessel in the brain bursts, causing damage to a part of the brain.”⁴¹ Symptoms of a stroke include⁴¹:

- Sudden numbness or weakness of the face, arms, or legs
- Sudden confusion or trouble speaking or understanding others
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Sudden severe headache with no known cause

Like a heart attack, getting medical attention right away when the symptoms of a stroke are recognized can increase the chances of surviving a stroke and may reduce complications from a stroke.⁴¹

In 2005, the BRFSS asked adults if a doctor, nurse or other health professional had ever told them they had a heart attack or myocardial infarction, angina or coronary heart disease or a stroke (Figure 20-1, Table 20-1).

Figure 20-1. Prevalence of Heart Conditions among NH Adults, 2005 NH BRFSS

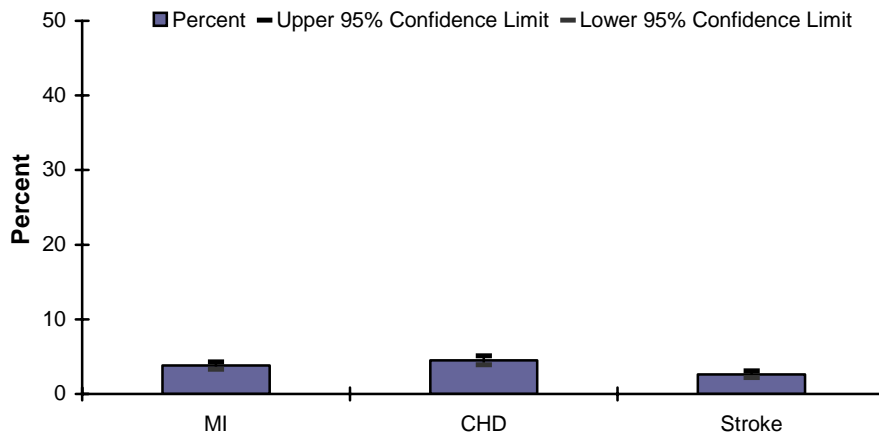


Table 20-1. Prevalence of Heart Conditions among NH Adults, 2005 NH BRFSS

<i>Condition</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Heart attack or myocardial Infarction	6,005	3.8	3.3-4.3
Angina or coronary Heart Disease	5,997	4.5	3.9-5.1
Stroke	6,021	2.6	2.2-3.1

Some overlap existed among cardiovascular conditions reported. For example, an estimated 2.2% of NH adults had been told they had CHD while an estimated 1.7% had both CHD and a heart attack (or MI), (Table 20-2).

Table 20-2. Estimated Proportion of NH Adults with Reported Cardiovascular Conditions, 2005 NH BRFSS

<i>CVD condition reported (N=5,955)</i>	<i>Weighted percent (95% Confidence Interval)</i>
No MI*, CHD* or stroke	92.4% (91.6 - 93.1)
CHD only	2.2% (1.8 - 2.7)
MI, CHD	1.7% (1.3 - 2.0)
Stroke only	1.6% (1.2 - 1.9)
MI only	1.4% (1.0 - 1.7)
MI, Stroke	0.3% (0.2 - 0.5)
MI, CHD and stroke	0.3% (0.1 - 0.4)
CHD and stroke	0.2% (0.1 - 0.3)

*MI = Myocardial Infarction or Heart Attack

*CHD = Coronary Heart Disease or Angina

Myocardial Infarction or Heart Attack

In 2005, 3.8% of NH adults reported they had received a diagnosis of myocardial infarction at some time. A significantly higher proportion of men reported a diagnosis of heart attack compared with women (Table 20-3). Adults aged 55 to 64 and 65 or older (Figure 20-2), adults with lower levels of education and adults with lower household incomes also had a significantly higher prevalence of reported heart attack (Table 20-3).

Figure 20-2. Prevalence of A Reported Diagnosis of Heart Attack or Myocardial Infarction, by Age, 2005 NH BRFSS

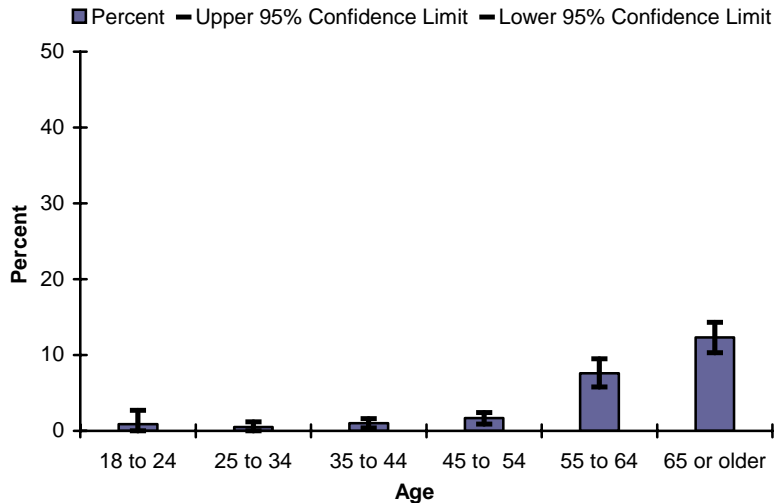


Table 20-3. Prevalence of a Reported Diagnosis of Heart Attack or Myocardial Infarction, by Demographic Characteristics, 2005 NH BRFSS

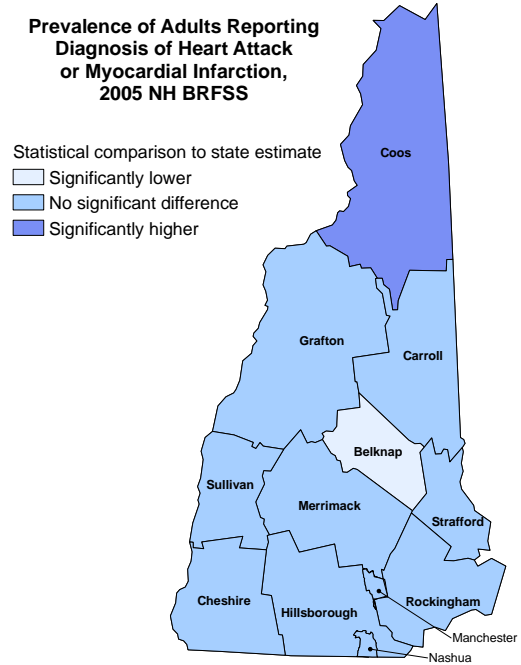
<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,005	3.8	3.3-4.3
Sex			
Male	2,426	4.9	4.0-5.9
Female	3,579	2.7	2.2-3.2
Age			
18-24	234	0.9	0.0-2.7
25-34	757	0.5	0.0-1.2
35-44	1,184	1.0	0.4-1.6
45-54	1,367	1.7	0.9-2.4
55-64	1,097	7.6	5.8-9.5
65+	1,283	12.3	10.3-14.3
Education			
Less than H.S.	383	10.2	6.5-14.0
H.S. or G.E.D.	1,797	4.1	3.2-5.1
Some post-H.S.	1,470	3.9	2.8-5.0
College graduate	2,345	2.4	1.8-3.0
Household income			
Less than \$15,000	480	11.5	8.2-14.9
\$15,000- 24,999	702	8.3	6.0-10.7
\$25,000- 34,999	605	4.8	2.3-7.3
\$35,000- 49,999	845	4.0	2.6-5.5
\$50,000- 74,999	1,037	1.9	1.0-2.7
\$75,000+	1,541	1.4	0.9-2.0

In 2005, the proportion of adults reporting that they had ever been told by a health professional they had a heart attack or myocardial infarction was significantly higher in Coos County and significantly lower in Belknap County compared with the NH average.

Table 20-4. Prevalence of Adults Reporting a Diagnosis of Heart Attack or Myocardial Infarction, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	358	1.7	0.3 - 3.2
Carroll	308	5.7	2.8 - 8.6
Cheshire	511	2.9	1.5 - 4.4
Coos	293	8.8	5.0 - 12.6
Grafton	498	2.6	1.4 - 3.9
Hillsborough	1,440	3.4	2.3 - 4.4
Merrimack	640	3.9	2.6 - 5.2
Rockingham	1,011	3.8	2.4 - 5.2
Strafford	621	5.1	3.2 - 7.0
Sullivan	325	4.2	2.0 - 6.4
Urban Areas			
Manchester	317	3.1	1.0 - 5.2
Nashua	262	4.9	1.8 - 8.0
New Hampshire	6,005	3.8	3.3 - 4.3

Figure 20-3.



Coronary Heart Disease or Angina

In 2005, 4.5% of NH adults reported a diagnosis of angina or coronary heart disease (CHD) (Table 20-5). The proportion of adults reporting a diagnosis of coronary heart disease or angina increased significantly with increasing age (Figure 20-4) and decreased significantly with increasing education and income levels (Table 20-5).

Figure 20-4. Prevalence of a Reported Diagnosis of Angina or Coronary Heart Disease, by Age, 2005 NH BRFSS

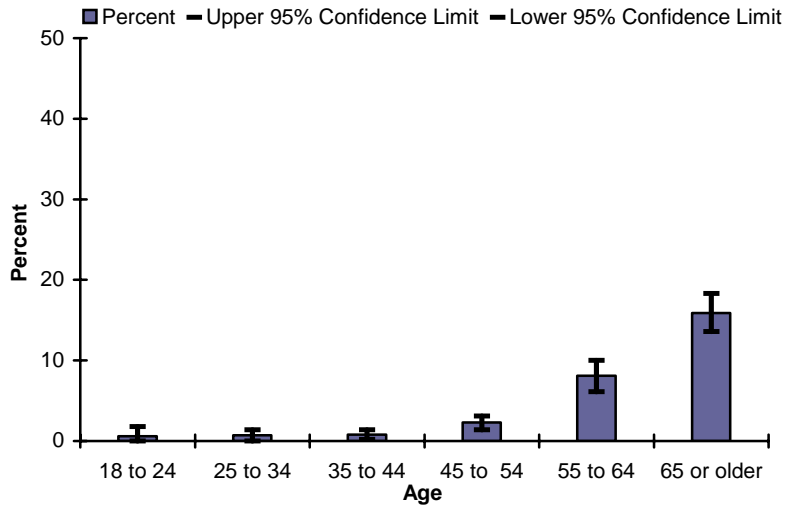


Table 20-5. Prevalence of a Reported Diagnosis of Angina or Coronary Heart Disease, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,997	4.5	3.9-5.1
Sex			
Male	2,422	5.2	4.3-6.2
Female	3,575	3.8	3.1-4.5
Age			
18-24	234	0.6	0.0-1.8
25-34	757	0.7	0.0-1.4
35-44	1,182	0.8	0.2-1.4
45-54	1,367	2.3	1.4-3.1
55-64	1,092	8.1	6.1-10.0
65+	1,281	15.9	13.6-18.3
Education			
Less than H.S.	383	9.3	6.2-12.3
H.S. or G.E.D.	1,791	5.0	3.9-6.1
Some post-H.S.	1,468	4.7	3.5-5.9
College graduate	2,344	3.2	2.4-3.9
Household income			
Less than \$15,000	481	11.1	7.8-14.4
\$15,000- 24,999	700	9.2	6.7-11.7
\$25,000- 34,999	603	5.2	3.3-7.1
\$35,000- 49,999	845	4.2	2.7-5.6
\$50,000- 74,999	1,037	2.5	1.4-3.7
\$75,000+	1,536	2.3	1.6-3.1

In 2005, the proportion of adults reporting ever receiving a diagnosis of angina or coronary heart disease was significantly lower in Belknap County compared with the NH average.

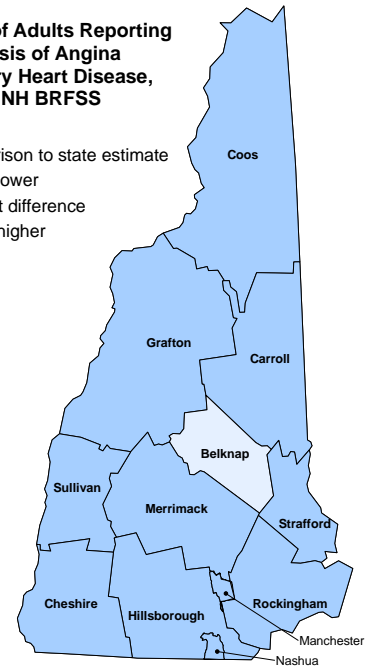
Table 20-6. Prevalence of Adults Reporting a Diagnosis of Angina or Coronary Heart Disease, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	357	2.2	0.9 - 3.4
Carroll	308	4.8	2.4 - 7.3
Cheshire	511	3.2	1.8 - 4.7
Coos	290	8.1	4.4 - 11.8
Grafton	497	3.5	2.1 - 4.9
Hillsborough	1,437	5.6	4.3 - 7.0
Merrimack	639	5.6	3.8 - 7.4
Rockingham	1,011	3.1	1.9 - 4.2
Strafford	624	5.6	3.7 - 7.5
Sullivan	323	4.9	2.6 - 7.2
Urban Areas			
Manchester	316	7.9	4.5 - 11.4
Nashua	264	5.4	2.4 - 8.4
New Hampshire	5,997	4.5	3.9 - 5.1

Figure 20-5.

Prevalence of Adults Reporting Diagnosis of Angina or Coronary Heart Disease, 2005 NH BRFSS

Statistical comparison to state estimate
 □ Significantly lower
 ■ No significant difference
 ■ Significantly higher



Stroke

In 2005, 2.6% of NH adults reported ever being told by a doctor they had a stroke (Table 20-7).

The proportion of adults reporting ever being told they had a stroke increased significantly with increasing age (Figure 20-6) and declined significantly as education and income increased (Table 20-7).

Figure 20-6. Prevalence of a Reported Diagnosis of Stroke, by Age, 2005 NH BRFSS

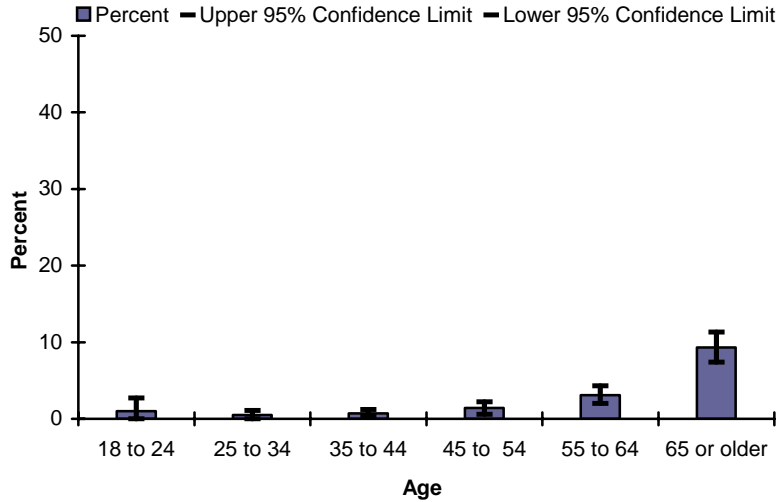


Table 20-7. Prevalence of a Reported Diagnosis of Stroke, by Demographic Characteristics, 2005 NH BRFSS

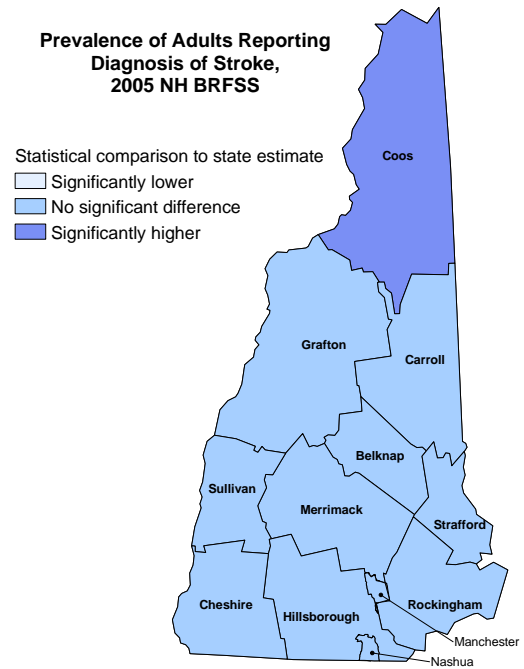
<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6,021	2.6	2.2-3.1
Sex			
Male	2,436	2.8	2.1-3.5
Female	3,585	2.4	1.8-3.0
Age			
18-24	234	1.0	0.0-2.7
25-34	757	0.5	0.0-1.1
35-44	1,189	0.7	0.3-1.2
45-54	1,367	1.4	0.6-2.2
55-64	1,101	3.1	2.0-4.3
65+	1,289	9.3	7.4-11.3
Education			
Less than H.S.	389	4.9	3.0-6.9
H.S. or G.E.D.	1,803	2.9	2.0-3.9
Some post-H.S.	1,474	2.9	1.9-4.0
College graduate	2,344	1.7	1.2-2.3
Household income			
Less than \$15,000	485	9.9	6.4-13.5
\$15,000- 24,999	704	5.7	3.2-8.3
\$25,000- 34,999	606	1.8	0.7-2.9
\$35,000- 49,999	849	1.9	1.0-2.8
\$50,000- 74,999	1,038	1.2	0.5-1.9
\$75,000+	1,540	1.3	0.7-1.8

In 2005, a significantly higher proportion of adults in Coos County reported ever receiving a diagnosis of stroke compared with the NH average.

Table 20-8. Prevalence of Adults Reporting Ever Being Told They Had a Stroke, 2005 NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	358	2.0	0.7 - 3.4
Carroll	306	2.0	0.6 - 3.4
Cheshire	512	2.1	0.8 - 3.4
Coos	294	8.5	4.8 - 12.3
Grafton	501	3.0	1.5 - 4.4
Hillsborough	1,447	2.6	1.6 - 3.7
Merrimack	641	3.3	1.5 - 5.1
Rockingham	1,015	1.5	0.7 - 2.3
Strafford	623	3.3	1.9 - 4.6
Sullivan	324	2.8	0.7 - 4.9
Urban Areas			
Manchester	321	2.5	0.5 - 4.6
Nashua	265	4.0	0.8 - 7.1
New Hampshire	6,021	2.6	2.2 - 3.1

Figure 20-7.



21. Diabetes

Diabetes is a chronic disease that affects a person's ability to control sugar levels in the blood and to convert sugar (glucose) into energy. There are two main types of diabetes, Type I and Type II. A third type of diabetes, gestational diabetes, develops only in pregnant women. Gestational diabetes can be very serious during the pregnancy, but it typically subsides when pregnancy ends. Type I diabetes, which results when the body does not produce enough insulin, typically begins during childhood and represents 5–10% of all diabetic cases.⁴² Type II diabetes results from the body being unable to use insulin that is produced. It generally develops in adulthood and accounts for 90–95% of all diabetes cases.⁴² Causes for Type I diabetes are currently not well understood and not controllable; Type II diabetes is often linked to obesity, physical inactivity and heredity.⁴²

CDC estimates that 21 million people in the U.S. have diabetes and approximately a third of these do not know they have diabetes. An additional 54 million have pre-diabetes.⁴² Overall, the direct and indirect costs of diabetes in the United States are estimated to be \$132 billion annually.⁴²

The BRFSS asked NH adults a series of questions about diabetes. In New Hampshire, the prevalence of (non-gestational) diabetes among adults was 6.5% in 2005. (Table 21-1)

Early detection, improved delivery of care, and better self-management are key for preventing diabetes complications.⁴³ Appropriate diet, monitoring, screening, and visits to health care professionals are all important pieces in successfully managing diabetes. In 2005, the NH BRFSS found 49% (95% CI: 43.1 – 54.0) of adults reported seeing a health professional at least four times over the preceding 12 months for their diabetes.

CDC reports that patient training to help people self-manage their diabetes prevents hospitalizations. Every \$1 invested in such training can cut health care costs by up to \$8.76.⁴³ In 2005, 63.1% (95% CI: 58.0 – 68.1) of NH adults with diabetes reported they had at some time taken a class about managing diabetes.

Studies in the United States and abroad have found that better blood sugar control reduces the risk for eye disease, kidney disease, and nerve disease by 40% in people with type I or type II diabetes.⁴² In 2005, 70.5% (95% CI: 65.5 – 75.5) of NH adults with diabetes checked their own blood sugar at least once daily.

Health care providers use the hemoglobin A_{1c} test (pronounced A one C) to measure a patient's glucose control. The American Diabetes Association (ADA) recommends that people with diabetes with demonstrated controlled glucose levels have their hemoglobin A_{1c} checked at least twice a year; those individuals yet to achieve control or those trying new medications should be tested more frequently.⁴⁴ In 2005, the BRFSS found that 90.8% (95% CI: 87.8 – 93.8) of NH adults with diabetes reported having a hemoglobin A_{1c} test at least once in the previous 12 months, while 36.4% (95% CI: 30.8 – 42.0) had a hemoglobin A_{1c} test four or more times in the previous 12 months.

Glucose control is vital to preventing kidney disease and can reduce the likelihood of developing other diabetic complications.⁴⁴ Treatment to control glucose levels has been shown to reduce diabetes-related kidney failure by 50%.⁴⁴ In 2005, 16.8% (95% CI: 12.6 – 21.0) of NH adults with diabetes reported taking insulin, 53.1% (95% CI: 47.8 – 58.4)

were taking diabetes pills, 10.9% (95% CI: 7.3 – 14.5) were taking a combination of insulin and oral medication, while 19.3% (95% CI: 15.5 – 23.0) were taking neither medication.

Foot care programs that include regular examinations and patient education could prevent up to 85% of diabetes-related amputations.⁴⁴ In 2005, the BRFSS found that 63.9% (95% CI: 58.5 – 69.3) of NH adults with diabetes checked their own feet at least once daily and 80.4% (95% CI: 76.4 – 84.4) had a foot exam by a health care provider yearly. In addition, 31.6% (95% CI: 26.6 – 36.6) had a foot exam by a health care provider at least four times in the previous year.

Retinopathy, a disease of the retina of the eye, is also a potential complication of diabetes and can lead to blindness. Regular eye exams and timely treatment can prevent up to 90% of diabetes related blindness.⁴³ In 2005, 76.7% of adults with diabetes (95% CI: 72.3 – 81.2) had an eye exam in which their pupils were dilated during the previous year.

An annual influenza vaccination is recommended for people with diabetes.⁴⁵ In 2005, 66.7% (95% CI: 61.7 – 71.7) of NH adults with diabetes reported they had received a flu shot in the past 12 months.

While, overall, 6.5% of NH adults reported diabetes in 2005, the prevalence of reported diabetes was significantly higher among older adults (Figure 21-1), among adults with less education and among adults with lower incomes (Table 21-1).

Figure 21-1. Proportion of NH Adults with Diabetes, by Age, 2005 NH BRFSS

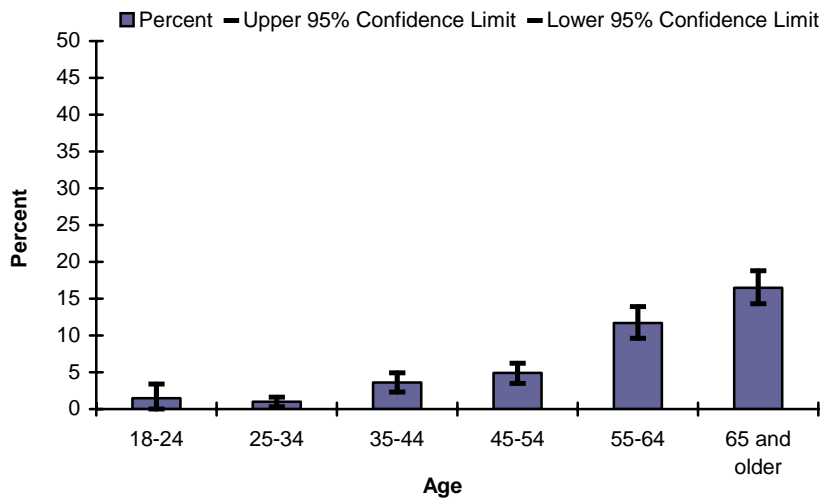


Table 21-1. Proportion of Adults Reporting They Had Been Told by a Health Professional They Had Diabetes, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	6031	6.5	5.8-7.1
Sex			
Male	2440	6.7	5.6-7.8
Female	3591	6.2	5.4-7.1
Age			
18-24	234	1.5	0.0-3.4
25-34	758	1.0	0.3-1.6
35-44	1189	3.6	2.3-4.9
45-54	1368	4.9	3.5-6.2
55-64	1100	11.7	9.6-13.9
65+	1298	16.5	14.3-18.8
Education			
Less than H.S.	392	11.8	8.0-15.7
H.S. or G.E.D.	1805	8.1	6.8-9.5
Some post-H.S.	1475	5.5	4.4-6.8
College graduate	2349	4.8	3.9-5.7
Household income			
Less than \$15,000	488	13.1	9.7-16.5
\$15,000- 24,999	706	11.5	8.8-14.3
\$25,000- 34,999	608	8.4	6.0-10.7
\$35,000- 49,999	850	6.7	4.9-8.54
\$50,000- 74,999	1039	4.8	3.4-6.2
\$75,000+	1540	3.8	2.7-5.0

The Diabetes Prevention Trial (DPT) showed that Type 2 diabetes can be prevented or delayed by even modest weight loss.⁴⁶ Research has also found that weight loss among people diagnosed with diabetes can reduce the need for diabetes medications. Programs promoting these lifestyle changes have been shown to be cost effective ways to prevent diabetes and improve the health of those already diagnosed with Type 2 diabetes.^{47, 48}

In NH the 2005 BRFSS found that the prevalence of obesity among adults with diabetes was more than twice that of adults without a diagnosis of diabetes. The prevalence of overweight among adults with diabetes was also significantly higher than among adults not reporting a diagnosis of diabetes (Table 21-2).

Table 21-2. Prevalence of Obesity and Overweight by Diabetes Status, 2005 NH BRFSS

<i>N=5,730</i>	<i>Diabetes reported</i>	<i>Diabetes not reported</i>
	<i>Weighted percent (95% CI)</i>	<i>Weighted percent (95% CI)</i>
Neither overweight nor obese	19.0% (14.5 - 23.5)	41.5% (39.8 - 43.2)
Overweight	28.4% (23.5 - 33.4)	37.4% (35.8 - 39.0)
Obese	52.6% (47.0 - 58.1)	21.1% (19.8 - 22.5)

No significant differences were found in the proportion of adults reporting they had ever been told by a health professional they had diabetes between 2001 and 2005 (Table 21-3). Please note there was a change to the available response categories for the diabetes prevalence question between 2003 and 2004. This change may have affected the prevalence estimate.

Table 21-3. Proportion of NH Adults Reporting Ever Having a Diagnosis of Diabetes, 2001-2005 NH BRFSS

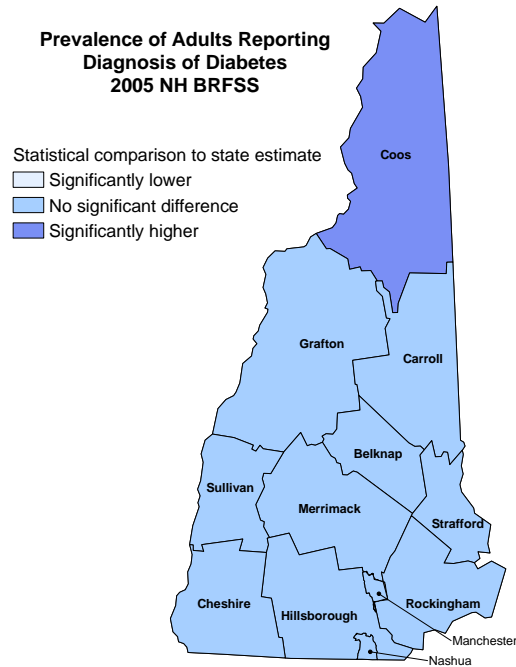
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	4,062	5.4	4.7 – 6.2
2002	5,031	6.2	5.5 – 7.0
2003	5,035	5.6	5.0 – 6.3
2004	5,063	6.5	5.8 – 7.2
2005	6,031	6.5	5.8 – 7.1

In 2005, a higher proportion of NH adults in Coos County reported ever being told by a health care provider that they had diabetes compared with the NH average (Table 21-4, Figure 21-2).

Table 21-4. Prevalence of Adults Reporting Ever Being Told They Had Diabetes By A Health Professional, 2005, NH BRFSS

Region	Sample size (N)	Percent	95% Confidence Interval
Counties			
Belknap	359	4.2	2.2 - 6.3
Carroll	309	5.6	3.0 - 8.2
Cheshire	513	6.7	4.4 - 9.0
Coos	294	12.5	8.3 - 16.6
Grafton	502	7.4	4.9 - 10.0
Hillsborough	1,449	7.3	5.7 - 8.8
Merrimack	641	5.1	3.5 - 6.7
Rockingham	1,015	5.6	4.2 - 7.1
Strafford	624	7.6	5.5 - 9.8
Sullivan	325	7.5	4.6 - 10.4
Urban Areas			
Manchester	321	9.3	5.4 - 13.2
Nashua	265	9.3	5.5 - 13.0
New Hampshire	6,031	6.5	5.8 - 7.1

Figure 21-2.



Two Healthy New Hampshire 2010 objectives for improving diabetes care were measured using BRFSS data. The first established a target for the percentage of adults with diabetes having the A one C or, “A_{1c}” test, in the previous 12 months.

The questions measuring the A_{1c} indicator changed after the 1999 NH 2010 baseline was set. In 2000, the first year the new questions were asked, 95% of NH adults said their provider had checked them for the A_{1c} test (95% CI: 90 – 100) at least once in the past 12 months.

In 2005, 90.8% (95% CI: 87.8 – 93.8) of adults with diabetes reported they had been checked for the A_{1c} at least once in the previous 12 months. The 2005 percentage was not statistically different from the year 2000 percentage.

The second Healthy New Hampshire 2010 objective related to diabetes care that used BRFSS data was the percentage of adults with diabetes having a dilated eye exam in the previous 12 months. The question for this indicator has remained unchanged. The target for 2010 was set at 80% of adults having a dilated eye exam in the past 12 months.

In 2005, 77% (95% CI: 72–81) of NH adults with diabetes reported having a dilated eye exam in the past year.

HNH2010 Objective: Increase the percentage of adults with diabetes who report having had a dilated eye exam in the last 12 months.



Target	80%
Baseline	71%
Current (2005)	77%

New Hampshire
Diabetes
Education Program

For more information about diabetes in New Hampshire, contact:
NH Department of Health and Human Services
Diabetes Education Program
603-271-5173 or 1-800-852-3345, ext. 5173

www.dhhs.state.nh.us/DHHS/CDPC/

22. Epilepsy

Epilepsy is a chronic condition that includes “various types of seizures”.⁴⁹ CDC’s Epilepsy Program defines a seizure as an event that “happens when abnormal electrical activity in the brain causes an involuntary change in body movement or function, sensation, awareness, or behavior.”⁴⁹ Seizures can last just a moment or result in loss of consciousness or convulsions.⁴⁹ It is important to know that, according to the CDC, “epilepsy is not contagious and cannot be transmitted from person to person.”⁴⁹

Epilepsy can be caused by “stroke, complications during childbirth, infections (such as meningitis, encephalitis, cysticercosis, or brain abscess), head trauma, and certain genetic disorders. Often, no definite cause can be found.”⁴⁹

The seizures caused by epilepsy can be treated. However, if the diagnosis of epilepsy is delayed and treatment not begun, the risk is higher for additional seizures, brain damage, disability, and even death from injuries received during a seizure.⁴⁹

These are some areas where CDC is working to improve the lives of people with epilepsy⁴⁹:

- Early diagnosis, and treatment;
- More research into who has epilepsy and why as well as how to best treat epilepsy;
- Helping people with epilepsy to manage their condition better;
- Better access to specialty care and comprehensive systems of care;
- Established criteria to determine quality of care in epilepsy;
- Systems and models of care that foster empowerment and independence for people with epilepsy and support their efforts toward improved seizure control and a good quality of life;
- Research and communication approaches that will combat the stigma associated with epilepsy, which will improve community awareness and the quality of life and care of people with epilepsy;
- Public education to improve people’s ability to recognize seizures and give first aid.

In addition, CDC provides a toolkit with information and other resources for teens with epilepsy and their families.⁵⁰ The toolkit can be found at www.cdc.gov/epilepsy/.

In 2005, 1.6% of NH adults reported having epilepsy or a seizure disorder. No variation was found by demographic characteristics (Table 22-1). Demographic categories were combined for analysis due to the small number of respondents reporting epilepsy or seizure disorder (Table 22-1).

Table 22-1. Prevalence of Epilepsy or Seizure Disorder among NH Adults, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	5,731	1.6	1.2-2.0
Gender			
Male	2,328	1.7	1.1-2.3
Female	3,403	1.5	1.0-2.0
Age			
18 to 44	2,047	2.0	1.3-2.7
45 or older	3,609	1.3	0.9-1.7
Education			
High School, GED or less	2,067	2.2	1.4-2.9
More than HS or GED	3,656	1.3	0.9-1.7
Income			
Less than \$35,000	1,722	2.2	1.4-3.0
\$35,000 or more	3,273	1.4	0.9-1.9

Infectious Disease Risk and Awareness

23. HIV/AIDS

The National Institutes of Health (NIH) reports that “AIDS (Acquired Immune Deficiency Syndrome) was first reported in the United States in 1981 and has since become a major worldwide epidemic.”⁵¹ Human Immunodeficiency Virus (HIV) is the virus that causes AIDS. By killing or damaging cells of the body's immune system, HIV progressively destroys the body's ability to fight infections and certain cancers. People diagnosed with AIDS may get life-threatening diseases called opportunistic infections, which are caused by microbes such as viruses or bacteria that usually do not make healthy people sick.⁵¹

More than 900,000 cases of AIDS have been reported in the United States since 1981. As many as 1,000,000 Americans may be infected with HIV and one-quarter may be unaware of their infection.⁵¹

HIV is spread through contact with blood, semen, vaginal secretions, and breast milk. Most commonly, HIV is spread by having unprotected sex with an infected partner but has also been transmitted through infected needles, most often those used in drug abuse.⁵¹ In the past, HIV has been transmitted through infected blood transfusions and blood products but since testing was begun, the risk from blood products is small.⁵¹

HIV can be transmitted from mother to child during pregnancy or birth or through breast milk. NIH reports that “approximately one-quarter to one-third of all untreated pregnant women infected with HIV will pass the infection to their babies.”⁵¹ If the mother takes certain drugs during pregnancy, she can significantly reduce the chances that her baby will get infected with HIV.⁵¹ If health care providers treat HIV-infected pregnant women and deliver their babies by cesarean section, the chances of the baby being infected can be reduced to a rate of one percent.⁵¹ HIV infection of newborns has been almost eradicated in the United States due to appropriate treatment.”⁵¹

NIH found that HIV is not transmitted by casual contact such as sharing food utensils, towels and bedding, swimming pools, telephones, or toilet seats. Biting insects such as mosquitoes or bedbugs do not spread HIV.⁵¹

In 2005, the NH BRFSS asked adults aged 18–64 years a series of questions regarding HIV. Among these adults, 39.5% reported being tested for HIV at some time (Table 23-1). Testing was most frequently done by a doctor or HMO (46.1%) (Table 23-2). Among adults aged 18 to 64 years, 3.3% (95% CI: 2.6-4.0) reported engaging in some type of activity in the last year which put them at risk of contracting HIV.

Women were significantly more likely to report HIV testing than men. Adults aged 25 to 34 had the highest prevalence of reported HIV testing compared with adults of other ages.

Figure 23-1. Proportion of NH Adults Aged 18 To 64 Years Ever Tested for HIV, by Age, 2005 NH BRFSS

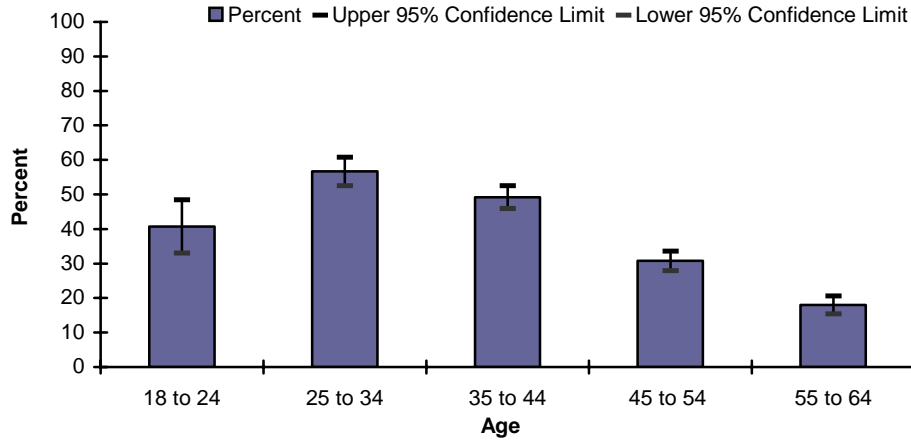


Table 23-1. Proportion of NH Adults Aged 18 To 64 Years Ever Tested for HIV, by Demographic Characteristics, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	4,474	39.5	37.7-41.2
Sex			
Male	1,836	36.1	33.5-38.8
Female	2,638	42.8	40.5-45.1
Age			
18-24	221	40.7	33.0-48.4
25-34	719	56.7	52.5-60.8
35-44	1,112	49.2	45.9-52.5
45-54	1,295	30.8	27.9-33.6
55-64	1,054	18.0	15.4-20.6
Education			
Less than H.S.	246	45.7	37.3-54.2
H.S. or G.E.D.	1,256	37.1	33.7-40.6
Some post-H.S.	1,137	40.3	36.7-43.9
College graduate	1,829	39.6	37.0-42.3
Household income			
Less than \$15,000	284	44.0	36.2-51.7
\$15,000- 24,999	419	43.6	37.6-49.7
\$25,000- 34,999	432	35.3	29.3-41.2
\$35,000- 49,999	648	42.9	37.9-48.0
\$50,000- 74,999	889	37.2	33.5-41.0

Among NH adults aged 18 to 64 years who had been tested for HIV, the most commonly reported testing location was a private doctor or HMO (Table 23-2).

Table 23-2. Site of Last HIV Test, NH Adults Aged 18 to 64 Years Reporting Ever Being Tested, 2005 NH BRFSS

<i>HIV Testing Site</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Private Doctor or HMO	763	46.2	43.2-49.1
Hospital or Clinic	620	34.4	31.6-37.2
Home or Somewhere Else	247	15.9	13.7-18.1
Counseling and Testing Site	43	3.0	2.0-4.1
Jail or Prison	9	0.4	0.1-0.8
Drug Treatment Facility	2	0.1	0.0-0.2

The proportion of NH adults aged 18 to 64 years reporting HIV testing was significantly lower in 2005 compared with 2001, 2002 and 2003 (Table 23-3).

Table 23-3. Proportion Ever Tested for HIV, NH Adults Aged 18 to 64 Years, 2001 - 2005 NH BRFSS

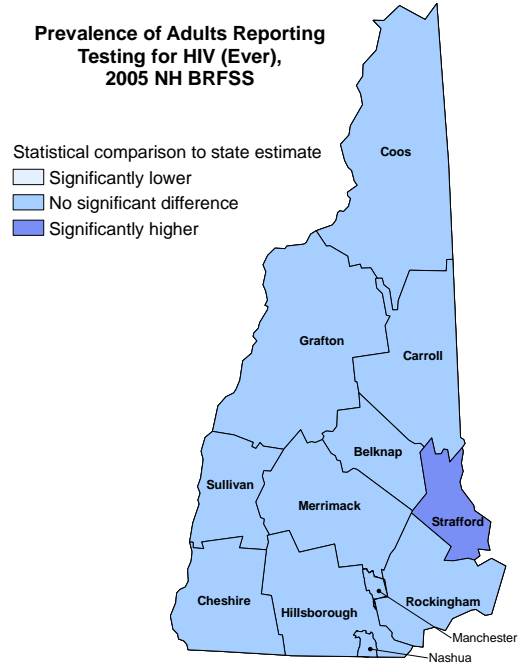
<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	3,163	44.8	42.8-46.8
2002	3,880	44.3	42.5-46.1
2003	3,826	45.2	43.4-47.0
2004	3,736	42.5	40.7-44.4
2005	4,474	39.5	37.7-41.2

In 2005, the proportion of adults aged 18 to 64 years in Strafford County reporting they had ever been tested for HIV was significantly higher compared with the NH average.

Table 23-4. Prevalence of Adults Aged 18 to 64 Reporting Testing for HIV, 2005, NH BRFSS

<i>Region</i>	<i>Sample size (N)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Counties			
Belknap	248	36.7	29.1 - 44.2
Carroll	205	42.3	34.7 - 50.0
Cheshire	373	34.2	28.7 - 39.8
Coos	220	36.4	29.3 - 43.5
Grafton	360	35.9	29.7 - 42.1
Hillsborough	1,114	39.0	35.6 - 42.3
Merrimack	485	40.5	35.0 - 46.0
Rockingham	763	40.7	36.5 - 44.9
Strafford	475	47.4	42.0 - 52.7
Sullivan	231	41.2	33.6 - 48.8
Urban Areas			
Manchester	234	44.5	37.2 - 51.7
Nashua	201	37.9	30.2 - 45.6
New Hampshire	4,474	39.5	37.7 - 41.2

Figure 23-2.



Adults aged 18 to 64 were asked if they had, in the past year, engaged in any activities that would put them at higher risk of contracting HIV. Overall, 3.3% of adults reported engaging in high-risk activities during the past year (Table 23-5).

The reported prevalence of HIV risk factors decreased significantly as age increased (Figure 23-3). The proportion of college graduates reporting HIV risk factors was significantly lower compared with adults with less than a high school education. The proportion of adults with household incomes of \$74,000 or more reporting HIV risk factors was significantly lower compared with adults with incomes of \$25,000 to \$34,999 or less than \$15,000 (Table 23-5).

Figure 23-3. Proportion of NH Adults Aged 18 to 64 Reporting Activities That Increased Their Risk of Contracting HIV, by Age, 2005 NH BRFSS

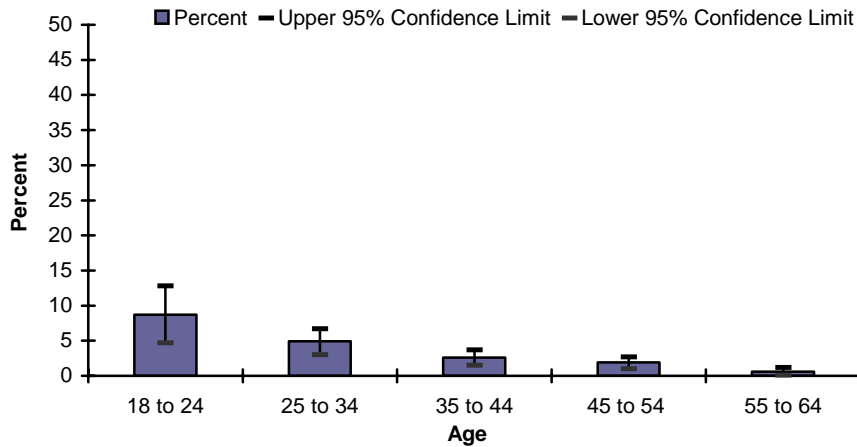


Table 23-5. Proportion of NH Adults Aged 18 to 64 Reporting Engaging in Activities in the Past Year That Increased Their Risk of Contracting HIV, 2005 NH BRFSS

<i>Characteristic</i>	<i>Sample Size (n)</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
Total	4,530	3.3	2.6-4.0
Sex			
Male	1,865	3.5	2.3-4.6
Female	2,665	3.1	2.2-3.9
Age			
18-24	223	8.7	4.7-12.8
25-34	721	4.9	3.0-6.7
35-44	1,131	2.6	1.5-3.7
45-54	1,312	1.9	1.0-2.7
55-64	1,068	0.6	0.1-1.2
Education			
Less than H.S.	249	6.5	2.7-10.4
H.S. or G.E.D.	1,269	4.9	3.1-6.7
Some post-H.S.	1,152	4.0	2.7-5.4
College graduate	1,853	1.1	0.5-1.8
Household income			
Less than \$15,000	288	6.6	2.7-10.5
\$15,000- 24,999	422	3.5	1.1-5.8
\$25,000- 34,999	436	6.8	3.1-10.4
\$35,000- 49,999	659	3.9	1.3-6.5
\$50,000- 74,999	894	3.3	1.9-4.8
\$75,000+	1,361	1.4	0.7-2.2

There was no change in the proportion of NH adults reporting activities putting them at increased risk for HIV between 2001 and 2005 (Table 23-6).

Table 23-6. Proportion of NH Adults Aged 18 to 64 Reporting Engaging Activities, In the Past Year That Increased Their Risk of Contracting HIV, 2005 NH BRFSS

<i>Year</i>	<i>Total Number of Respondents for the Year Indicated</i>	<i>Percent</i>	<i>95% Confidence Interval</i>
2001	NA	NA	NA
2002	4,033	2.7	2.0-3.3
2003	3,896	3.6	2.8-4.4
2004	3,845	2.9	2.3-3.6
2005	4,530	3.3	2.6-4.0

Percentages will not sum to 100% because each estimate represents the percentage of respondents within each year.

For more information about HIV and AIDS prevention efforts in
New Hampshire, contact:

The STD/HIV Prevention Program: 603-271-4502

Or go to:

www.dhhs.state.nh.us/DHHS/STDHIVPREVENT/hiv.htm

The NH AIDS Hotline 1-800-752-AIDS

References

- ¹ Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates based on data from the National Health Interview Survey, July – December 2006. National Center for Health Statistics. Available from: <http://www.cdc.gov/nchs/nhis.htm>. May 14, 2007. Accessed January 2008.
- ² U.S. Department of Health and Human Services. *Mental Health: A Report of the Surgeon General – Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center of Mental Health Services, National Institutes Of Health, National Institute of Mental Health, 1999. Available at www.mentalhealth.org/specials/surgeongeneralreport/home.html
- ³ Strine TW, Chapman DP, Balluz LS, Moriarty DG, Mokdad, AH. The Associations between Life Satisfaction and Health-Related Quality Of Life, Chronic Illness and Health Behaviors among U.S. Community-Dwelling Adults. *J Community Health*. 2007;33:40-50.
- ⁴ Koivumaa-Honkanen H, Honkanen R, Viinamaki H, Heikkila K, Kaprio J, Koskenvuo M. Self-Reported Life Satisfaction And 20 –Year Mortality In Health Finnish Adults. *Am J Epidemiol*. 2000;152:983-91.
- ⁵ Strine TW, Chapman DP, Balluz L, Mokdad AH. Health-Related Quality Of Life And Health Behaviors By Social And Emotional Support: Their Relevance To Psychiatry And Medicine. *Soc Psychiatry Psychiatr Epidemiol*. 2007; Oct 25.
- ⁶ NH Department of health and Human Services. Healthy New Hampshire 2010. Concord, NH. NH Department of Health and Human Services, 2001. Available at: <http://www.healthynh2010.org>. Accessed December 2007.
- ⁷ The Guide to Community Preventive Services, 2005. Available at: www.thecommunityguide.org/. Accessed December 2007.
- ⁸ Kreuter MW, Chheda SG, Bull FC. How does physician advice influence patient behavior? Evidence for a priming effect. *Arch Fam Med*. 2000 May;9(5):426-33.
- ⁹ U.S. Department of Health and Human Services. *The Health Consequences of Smoking: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.
- ¹⁰ The Guide To Community Preventive Services : What Works To Promote Health?, Task Force on Community Preventive Services, edited by Stephanie Zaza, Peter A. Briss, Kate W. Harris. Oxford University Press. 2005.
- ¹¹ Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *JAMA*. 2004 Mar 10;291(10):1238-45. Erratum in: [JAMA. 2005 Jan 19;293\(3\):293-4](http://www.jama.com/erratum/2005/01/19/293(3):293-4). *JAMA*. 2005 Jan 19;293(3):298
- ¹² Centers for Disease Control and Prevention, Alcohol and Public Health. Available at: <http://www.cdc.gov/alcohol/>. Accessed August 2008.
- ¹³ Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, Fetal Alcohol Spectrum Disorders. Available at: <http://www.cdc.gov/ncbddd/fas/> Accessed August 2008.
- ¹⁴ Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, Overweight and Obesity. Available at: <http://www.cdc.gov/nccdphp/dnpa/obesity/> Accessed December 2007.
- ¹⁵ Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion. BMI: Body Mass Index. Available at: www.cdc.gov/nccdphp/dnpa/bmi/. Accessed February, 2008.
- ¹⁶ Nelson DE, Powell-Griner E, Towne M, Kovar MG. A Comparison of National Estimates From the National Health Interview Survey and the Behavioral Risk Factor Surveillance System. *Am J Public Health*. 2003;93:1335–1341)

-
- ¹⁷ Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, Physical Activity for Everyone. Available at: <http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/index.htm>. Accessed December 2007.
- ¹⁸ U.S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity. [Rockville, MD]: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; [2001]. Available from: U.S. GPO, Washington.
- ¹⁹ Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity and Obesity, National Center for Chronic Disease Prevention and Health Promotion, Nutrition for Everyone, Fruits and Vegetables. Available at: www.cdc.gov/nccdphp/dnpa/nutrition/nutrition_for_everyone/fruits_vegetables/index.htm. Accessed December 2007.
- ²⁰ Centers for Disease Control and Prevention, Fruits and Veggies Matter. Available at: www.fruitsandveggiesmatter.gov/index.html. Accessed December 2007.
- ²¹ 5 A Day For Better Health Program Web Site. Available at: www.5aday.org/index.htm Accessed December 2007.
- ²² Findings from the Behavioral Risk Factor Surveillance System in New Hampshire, 2001-2004. Concord, NH New Hampshire Department of Health and Human Services, Division of Public Health Services Health Statistics Section, 2006.
- ²³ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention: Key Facts about influenza and influenza vaccine. Available at: <http://www.cdc.gov/flu/protect/keyfacts.htm>. Accessed November 2007.
- ²⁴ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention: Key Facts About Seasonal Flu Vaccine. Available at: <http://www.cdc.gov/FLU/protect/keyfacts.htm>. Accessed July, 2008.
- ²⁵ <http://www.flumist.com/>. Accessed July, 17, 2008.
- ²⁶ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Immunization Program. Epidemiology & Prevention of Vaccine-Preventable Diseases, "The Pink Book", 10th Edition. Available at: <http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm>. Accessed July, 2008.
- ²⁷ Centers for Disease Control and Prevention, Division of Heart Disease and Stroke Prevention. Available at: <http://www.cdc.gov/DHDS/P/>. Accessed December 2007.
- ²⁸ Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention, National Center for Chronic Disease Prevention and Health Promotion, High Blood Pressure. Available at: www.cdc.gov/bloodpressure/. Accessed December 2007.
- ²⁹ Chalsma A, Reichel D, Taylor C, *Leading Causes of Death of New Hampshire Residents, 1999-2007*; Concord, NH: New Hampshire Department of Health and Human Services, Division of Public Health Services, Health Statistics and Data Management Section, 2005 (Data from death certificate data, New Hampshire Division of Vital Records Administration, New Hampshire Department of State).
- ³⁰ U.S. Department of Health and Human Services, National Heart, Lung and Blood Institute, National High Blood Pressure Education Program. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure. August 2004. Available at: <http://www.nhlbi.nih.gov/guidelines/hypertension/jnc7full.pdf>. Accessed December 2007.
- ³¹ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Arthritis Program. Available at: <http://www.cdc.gov/arthritis/>. Accessed August 2008.
- ³² Centers for Disease Control and Prevention. State-Specific Prevalence of Arthritis-Attributable Work Limitation – United States, 2003. MMWR 2007;56: 1045-1049.
- ³³ Centers for Disease Control and Prevention. National and State Medical Expenditures and Lost Earnings Attributable to Arthritis and Other Rheumatic Conditions — United States, 2003. MMWR 2007;56: 1045-1049.
- ³⁴ National Institutes of Health; National Heart, Lung, and Blood Institute website: <http://aspe.hhs.gov/sp/asthma/overview.htm#epidemic> Accessed August 2008.

-
- ³⁵ U.S. Occupational Safety and Health Administration. Available at: www.osha.gov/SLTC/occupationalasthma/. Accessed December 2007.
- ³⁶ Canadian Centre for Occupational Health and Safety. Available at: <http://www.ccohs.ca/oshanswers/diseases/asthma.html>. Accessed December 2007.
- ³⁷ Balmes J, Becklake M, Blanc P, Henneberger P, Kreiss K, Mapp C, Milton D, Schwartz D, Toren K, Viegi G. American Thoracic Society Statement: Occupational contribution to burden of airway disease. *Am J Respir Crit Care Med* 2003; 167:787-797.
- ³⁸ Chalsma A, Reichel D, Taylor C, *Leading Causes of Death of New Hampshire Residents, 1999-2001*; Concord, NH: New Hampshire Department of Health and Human Services, Division of Public Health Services, Health Statistics and Data Management Section, 2005 (Data from death certificate data, New Hampshire Division of Vital Records Administration, New Hampshire Department of State).
- ³⁹ *Heart Disease Facts and Statistics*. CDC Division For Heart Disease and Stroke Prevention, National Center For Chronic Disease Prevention And Health Promotion. Available at: <http://www.cdc.gov/HeartDisease/facts.htm> Accessed August 2008.
- ⁴⁰ Hoyert DL, Heron MP, Murphy SL, Kung H. Deaths: Final Data for 2003. *National vital statistics reports*; vol 54 no 13. Hyattsville, MD: National Center for Health Statistics. 2006.
- ⁴¹ Stroke, CDC, Division for Heart Disease and Stroke Prevention, National Center for Chronic Disease Prevention and Health Promotion. Available at: <http://www.cdc.gov/stroke/>. Accessed December 2007.
- ⁴² U.S. Department of Health and Human Services. *Diabetes: Disabling Disease to Double by 2050, 2007*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Available at www.cdc.gov/nccdp/publications/aag/ddt.htm. Accessed December 2007.
- ⁴³ U.S. Department of Health and Human Services. *Fact Sheet: Preventing Diabetes and its Complications*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Available at <http://www.cdc.gov/nccdp/publications/factsheets/Prevention/diabetes.htm>. Accessed December 2007.
- ⁴⁴ American Diabetes Association. *All About Diabetes*. Available at www.diabetes.org/about-diabetes.jsp. Accessed September 2006.
- ⁴⁵ Centers for Disease Control and Prevention. *Prevention and Control of Influenza, Recommendations of the Advisory Committee on Immunization Practices (ACIP)*. MMWR 2006;55(RR10).
- ⁴⁶ Diabetes Prevention Program (DPP) Research Group. The diabetes prevention program (DPP): Description of lifestyle intervention. *Diabetes Care*. 2002; 25:2166.
- ⁴⁷ Yu AP, Wu EQ, Birnbaum HG, Emani S, Fay M, Pohl G, Wintle M, Yang E, Oglesby A. Short-term economic impact of body weight change among patients with type 2 diabetes treated with antidiabetic agents: analysis using claims, laboratory, and medical record data. *Current Medical Research and Opinions*. 2007; Vol 23, No 9:2157-2169.
- ⁴⁸ Hamdy O, Carver C. The why WAIT program: Improving clinical outcomes through weight management in Type 2 diabetes. *Current Diabetes Reports*. 2008; 8:413-420.
- ⁴⁹ Centers for Disease Control and Prevention, Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion. *Epilepsy*. Available at: <http://www.cdc.gov/Epilepsy/>. Accessed December 2007.
- ⁵⁰ Centers For Disease Control And Prevention, Division Of Adult And Community Health, National Center For Chronic Disease Prevention And Health Promotion. *You Are Not Alone. Toolkit For Parents And Teens With Epilepsy*. <http://www.cdc.gov/Epilepsy/toolkit/index.htm>. Accessed August 2008.
- ⁵¹ U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Allergy and Infectious Diseases. *HIV / AIDS: An Overview*. Available at: <http://www3.niaid.nih.gov/topics/HIVAIDS/> Accessed December 2007.