# FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001-2004

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# Introduction

By the early 1980s, 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 data collected by New Hampshire Behavioral Risk Factor Surveillance System (NH BRFSS) between 2001 and 2004. The intent of this report was to make available data collected by the NH BRFSS between 2001 and 2004. While the focus of this report is on the 2004 survey, results are presented for 2001 through 2003 where topics were not covered on the 2004 questionnaire and to present trends over the four years.

### Frequently Asked Questions

#### 1. Who is included in BRFSS?

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

#### 2. What are 95% Confidence Intervals?

Because the BRFSS interviews are 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, Self-Reported Health Status, our best estimate from the 2004 survey was that 26.0% of respondents thought their health was excellent. However, the true value may be as low as 24.6% or as high as 274%.

# 3. Why are some results from 2004 and others from earlier years?

The intent of this report was to make available data collected by the NH BRFSS between 2001 and 2004. The most recent results are presented for questions asked during this period.

# 4. 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% CIs 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% CIs do overlap (i.e., if the 95% CIs share any of the same values), we cannot say, using the 2004 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 2004 BRFSS was not large enough to detect a difference.

# 5. Where can I find copies of the NH BRFSS questionnaires used for 2001-2004?

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

# 6. 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 nation. Healthy New Hampshire 2010 is a similar initiative lead by health care and public health professionals in New Hampshire. Information about Healthy People 2010 can be found at: www.healthypeople.gov/

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### Interpreting the tables and graphs

Each table in this report presents the sample size (N) or the number of respondents that answered the questions indicated, the weighted percentage of respondents giving the indicated response and the 95% Confidence Interval. Please see Frequently Asked Question # 2 for information about Confidence Intervals.

For example, in Table 1-1, Self-Reported Health Status, 1,282 NH adults reported their health status as excellent. This represents 26.0% of NH adults. The 95% CI around this estimate was 24.6% to 27.4%.

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 are not significantly different. For example, in Figure 1-1, the small lines at the top of the "Excellent" bar clearly do not overlap that for the "Poor" bar. This indicates that CIs for these results are significantly different. Tables with percentages and 95% CIs are provided below each graph.

### Healthy New Hampshire 2010



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Healthy New Hampshire 2010 is an initiative that sets objectives for improving the health of New Hampshire's residents. Public health and community health professionals led this initiative. Healthy People 2010 is a similar, nationwide initiative to set health-related goals and objectives for the nation.

Several objectives in Healthy New Hampshire 2010 used BRFSS data to measure their baseline and target indicators. These BRFSS indicators, along with their Healthy New Hampshire objectives are included at the end of sections, where applicable.

More information about Healthy New Hampshire 2010 can be found at: <a href="http://www.healthynh2010.org/">www.healthynh2010.org/</a> . Information about Healthy People 2010 can be found at: <a href="http://www.healthypeople.gov/">www.healthypeople.gov/</a> .

# **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 land-line 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 all year long and, at various times of the day. Several attempts are made to reach a selected respondent. If necessary, a respondent can schedule a call back at a more convenient time. Once a respondent has either completed an interview or refused to participate, and data quality procedures are complete, the phone number is deleted to maintain the anonymity of the respondents.

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.

### Limitations

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BRFSS data have some limitations that should be kept in mind when interpreting results.

BRFSS data are self-reported. This means that individuals respond to questions based on their best recollection and understanding of behaviors and health conditions. This may result in higher or lower estimates of some behaviors or conditions than would be found if respondents were interviewed in person or evaluated with a medical examination. One example is Body Mass Index (BMI). Studies have found that BMI reported in telephone surveys, including the BRFSS, tend to be lower than that found by surveys which provide medical examinations to measure respondents' height and weight. <sup>1</sup>

Individuals not living in private residences are excluded from the BRFSS sample. This includes those living in institutions or group quarters such as prisons, nursing homes or college dormitories. In addition, adults without land-line telephones in their residences are not part of the BRFSS sample. These sample characteristics may impact data collection in some populations more than others. For example, younger adults are more likely to use only cell phones and may be

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living in group quarters such as college dormitories. BRFSS are weighted to compensate for this "non-coverage", and to make the data representative of NH as a whole.

### 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 for the phone numbers called.

Three commonly reported response rates for BRFSS data are the CASRO Rate, the Cooperation Rate and the Refusal Rate. The Council of American Survey Research Organizations (CASRO) response rate calculation assumes that unresolved phone numbers contain the same percentage of eligible households as the records whose eligibility or ineligibility are determined. The 2004 NH BRFSS CASRO response rate was 46%. The median for all BRFSS states was 52.7%. 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 problems with interviewing techniques. In 2004, the Cooperation Rate for the NH BRFSS was 72%. 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 2004 BRFSS was 16.9%. The median Refusal Rate was 16.1% in 2004. Outcome rates for the 2001 through 2004 BRFSS surveys are presented below:

| Year       | 2001 | 2002 | 2003 | 2004 |
|------------|------|------|------|------|
| CASRO Rate | 47%  | 53%  | 46%  | 46%  |

Because the BRFSS is based on a complex survey sample design, 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 Frequently Asked Question #2.

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

# Results

### Health Status

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#### 1. Overall Perception of Health

A person's perception of his or her own health, regardless of medical diagnoses, is an important measure of quality of life. The BRFSS asked NH adults to rate their own health as excellent, very good, good, fair or poor. Most reported their health status as good, very good or excellent, as shown in Figure 1-1 and Table 1-1.

#### Figure 1-1. Self-Reported Health Status Rating, 2004 NH BRFSS





| Health Status Rating | Sample Size (N) | Percent | 95% Confidence Interval |
|----------------------|-----------------|---------|-------------------------|
| Excellent            | 1282            | 26.0    | 24.6 - 27.4             |
| Very good            | 1817            | 37.2    | 35.6 – 38.8             |
| Good                 | 1302            | 25.7    | 24.3 – 27.1             |
| Fair                 | 454             | 7.9     | 7.1 – 8.7               |
| Poor                 | 200             | 3.2     | 2.7 – 3.7               |

Percentages in this table represent the proportion of all survey respondents choosing each health status category.

FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section Table 1-2 and Figure 1-2 look more closely at individuals who felt that their health was: excellent, very good or good. Proportions by gender, age, education and income were examined. Several differences among the groups are worth highlighting:

- **Gender Differences:** There were no significant differences in self-reported health status for men and women in 2004.
- Age Differences: In general, younger individuals reported better health status. Those who were aged 65 or older were significantly less likely than younger individuals to report their health status as excellent, very good or good.
- Educational Differences: Individuals with less education are significantly less likely to report excellent, very good or good health status. The proportion of individuals with a high school education or less reported excellent, very good or good health significantly less often than individuals with some post high school education.
- **Income Differences:** Individuals with lower incomes were significantly less likely to rate their health as excellent, very good or good than those with higher incomes as shown in Figure 1-2.

## Figure 1-2. Self-Rated Health Status Excellent, Very Good Or Good, By Income, 2004 NH BRFSS



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| <b>.</b> .         | Sample Size |         | 95% Confidence |
|--------------------|-------------|---------|----------------|
| Characteristic     | (N)         | Percent | Interval       |
| Total              | 5055        | 88.9    | 88.0-89.9      |
| Sex                |             |         |                |
| Male               | 2103        | 89.2    | 87.8-90.7      |
| Female             | 2952        | 88.6    | 87.4-89.9      |
| Age                |             |         |                |
| 18-24              | 242         | 94.6    | 91.5-97.7      |
| 25-34              | 631         | 96.1    | 94.6-97.7      |
| 35-44              | 1057        | 93.1    | 91.4-94.8      |
| 45-54              | 1188        | 89.3    | 87.2-91.4      |
| 55-64              | 871         | 83.8    | 81.1-86.5      |
| 65+                | 1019        | 75.0    | 72.0-77.9      |
| Education          |             |         |                |
| Less than high     | 349         | 69.2    | 63.5-74.9      |
| school             |             |         |                |
| High School or     | 1463        | 86.8    | 84.9-88.7      |
| G.E.D.             |             |         |                |
| Some post high     | 1264        | 88.8    | 86.9-90.8      |
| school             |             |         |                |
| College graduate   | 1972        | 94.4    | 93.4-95.5      |
| Household income   |             |         |                |
| Less than \$15,000 | 392         | 59.2    | 53.3-65.2      |
| \$15,000- 24,999   | 611         | 75.9    | 71.8-80.1      |
| \$25,000- 34,999   | 504         | 87.3    | 84.2-90.5      |
| \$35,000- 49,999   | 760         | 90.9    | 88.7-93.1      |
| \$50,000- 74,999   | 904         | 94.7    | 93.1-96.3      |
| \$75,000+          | 1257        | 96.7    | 95.7-97.8      |

Table 1-2. Self-Reported Health Status Of Excellent, Very Good Or Good, By Demographic Characteristics, 2004 NH BRFSS

Table 1-3 examines the self-reported health status of NH residents for the years 2001 through 2004. Approximately 90% of NH adults rated their health as excellent, very good or good over these four years. While there was a significant change in adult rating of health status between 2001 and 2002, there was not a significant trend overall for the period.

| Table 1-3<br>2004 NH | 3. Self-Reported Health<br>BRFSS | Status As Exco | ellent, Good Or Very Good, | 2001 - |
|----------------------|----------------------------------|----------------|----------------------------|--------|
|                      | Total                            |                |                            | _      |

| Year |             | Percent | 95% Confidence Interval |
|------|-------------|---------|-------------------------|
| 1001 | Sample Size | 1 croom |                         |
| 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               |

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

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#### 2. Physical Health

BRFSS respondents were asked specifically about their physical health in the previous month. Nearly two-thirds of NH adults said their physical health was good on all 30 days in the past month. However, 6.2% (95% CI: 5.5-7.0) of New Hampshire residents rated their physical health as not good on all of the past thirty days (Figure 2-1 and Table 2-1).

## Figure 2-1. Number of Days During The Past 30 Days When Physical Health Was Not Good, 2004 NH BRFSS



■ Percent – Upper Confidence Limit ♦ Lower Confidence Limit

## Table 2-1. Number Of Days During The Past 30 Days When Physical Health Was Not Good, 2004 NH BRFSS

|                | Sample Size |         |                         |
|----------------|-------------|---------|-------------------------|
| Number of days | (N)         | Percent | 95% Confidence Interval |
| None           | 3304        | 66.1    | 64.5-67.7               |
| 1-2 days       | 518         | 11.1    | 10.1-12.2               |
| 3-7 days       | 470         | 9.7     | 8.7-10.7                |
| 8-29 days      | 354         | 6.8     | 6.0-7.7                 |
| 30 days        | 346         | 6.2     | 5.5-7.0                 |

Percentages in this table represent the proportion of all survey respondents reporting bad physical health for the indicated number of days.

Table 2-2 examines self-reported physical health status of NH adults in more detail by presenting the proportion of adults with no physical health problems in the past month by demographic characteristics.

- **Gender Differences:** The proportion of NH males and females reporting that they had good physical health on all days did not differ significantly.
- Age Differences: A significantly higher proportion of younger adults experienced good physical health on all 30 days of the past month than older adults.
- Educational Differences: College graduates were significantly more likely to have good physical health on all 30 days of the past month than all other education levels, while adults with less than a high school education were significantly less likely to have good physical health on all days. (Figure 2-2)
- **Income Differences:** Adults with higher incomes were significantly more likely to report having good physical health on all 30 days of the past month than adults at lower incomes.

#### Figure 2-2. Proportion Of NH Adults Having Good Physical Health On All Thirty Days Of The Past Month, 2004 NH BRFSS.



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|                    | Sample Size | ·       | 95% Confidence |
|--------------------|-------------|---------|----------------|
| Characteristic     | (N)         | Percent | Interval       |
| Total              | 4992        | 66.1    | 64.5-67.7      |
| Sex                |             |         |                |
| Male               | 2080        | 69.0    | 66.7-71.4      |
| Female             | 2912        | 63.3    | 61.3-65.4      |
| Age                |             |         |                |
| 18-24              | 242         | 59.4    | 52.6-66.1      |
| 25-34              | 628         | 68.8    | 64.7-72.8      |
| 35-44              | 1055        | 67.6    | 64.5-70.8      |
| 45-54              | 1177        | 67.0    | 64.0-70.0      |
| 55-64              | 862         | 69.1    | 65.7-72.4      |
| 65+                | 982         | 62.5    | 59.2-65.9      |
| Education          |             |         |                |
| Less than H.S.     | 337         | 52.3    | 45.7-58.8      |
| H.S. or G.E.D.     | 1442        | 65.3    | 62.3-68.2      |
| Some post-H.S.     | 1249        | 62.8    | 59.5-66.0      |
| College graduate   | 1958        | 71.7    | 69.4-74.0      |
| Household income   |             |         |                |
| Less than \$15,000 | 380         | 43.2    | 36.8-49.7      |
| \$15,000- 24,999   | 602         | 56.9    | 52.0-61.8      |
| \$25,000- 34,999   | 493         | 60.7    | 55.2-66.2      |
| \$35,000- 49,999   | 754         | 66.5    | 62.6-70.5      |
| \$50,000- 74,999   | 901         | 70.4    | 66.9-73.9      |
| \$75,000+          | 1254        | 73.2    | 70.4-76.0      |

| Table 2-2. Proportion Of NH Adults Reporting Good Physical Health On All Of The |
|---|
| Past 30 Davs, By Demographic Characteristics, 2004 NH BRFSS                     |

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, 2003 and 2004. Approximately two-thirds of NH adults reported good physical health for all days during the previous month for each of the three years. There was no significant change during these years. This question was not asked in 2002.

| Table 2-3. Proportion Of NH Adults With No Bad Physical Health Days In Th | ۱e |
|---|----|
| Last 30, 2001 - 2004 NH BRFSS   |    |

|      | Total       |         |                         |
|------|-------------|---------|-------------------------|
| Year | Sample Size | Percent | 95% Confidence Interval |
| 2001 | 4007        | 66.5    | 64.7-68.2               |
| 2002 | NA          | NA      | NA                      |
| 2003 | 4983        | 67.0    | 65.5-68.5               |
| 2004 | 4992        | 66.1    | 64.5-67.7               |

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

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#### 3. Mental Health

Mental health is increasingly recognized as 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".<sup>2</sup> The Surgeon General reported that a range of treatments exist for most mental disorders and "the efficacy of mental health treatments is well documented". <sup>2</sup> In a study commissioned by the World Health Organization, researchers from Harvard University reported that mental illness is the second leading cause of disability and premature death in the United States.<sup>3</sup>

The BRFSS asks adults to rate the quality of their mental health during the most recent 30 days. According to the 2004 BRFSS, 66.2% (95% CI: 64.6 - 67.8) of New Hampshire adults experienced good mental health on all of the previous 30 days (Table 3-1). However, for 4.3% (95% CI: 3.7 - 5.0) of NH adults, mental health was not good on any of the previous thirty days (Figure 3-1 and Table 3-1).

## Figure 3-1. Number Of Days In The Past 30 Days When Mental Health Was Not Good Among NH Adults, 2004 NH BRFSS



Table 3-1. Number Of Days In The Past 30 Days When Mental Health Was Not Good Among NH Adults, 2004 NH BRFSS

|                | Confidence      |         |           |  |
|----------------|-----------------|---------|-----------|--|
| Number of Days | Sample Size (N) | Percent | Interval  |  |
| None           | 3393            | 66.2    | 64.6-67.8 |  |
| 1 to 2         | 468             | 10.2    | 9.2-11.3  |  |
| 3 to 7         | 485             | 10.3    | 9.3-11.3  |  |
| 8 to 29        | 415             | 9.0     | 8.0-10.0  |  |
| 30 days        | 237             | 4.3     | 3.7-5.0   |  |

Percentages in this table represent the proportion of all survey respondents reporting bad mental health for the indicated number of days.

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Differences existed among NH adults in reported mental health status by demographic characteristics. Table 3-2 represents the proportion of NH adults reporting they experienced good mental health on all of the previous 30 days by demographic characteristics.

- **Gender Differences:** Men were significantly more likely to report good mental health on all 30 days of the previous month than women.
- Age Differences: Older adults in New Hampshire were significantly more likely to report having good mental health on all 30 days of the previous month than younger adults. (Figure 3-2)
- Educational Differences: A significantly higher proportion of college graduates reported good mental health during the past month than adults with other levels of education.
- **Income Differences:** Adults with higher incomes were significantly more likely to report good mental health on all days of the past month than adults with lower incomes.

## Figure 3-2. Proportion Of NH Adults Experiencing Good Mental Health On All Of The Past 30 Days, By Age 2004 NH BRFSS



FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

|                    | Sample   |         |                         |
|--------------------|----------|---------|-------------------------|
| Characteristic     | Size (N) | Percent | 95% Confidence Interval |
| Total              | 4998     | 66.2    | 64.6-67.8               |
| Sex                |          |         |                         |
| Male               | 2082     | 71.3    | 68.9-73.7               |
| Female             | 2916     | 61.3    | 59.2-63.4               |
| Age                |          |         |                         |
| 18-24              | 239      | 47.4    | 40.5-54.4               |
| 25-34              | 622      | 58.0    | 53.7-62.3               |
| 35-44              | 1046     | 62.9    | 59.7-66.2               |
| 45-54              | 1180     | 65.6    | 62.5-68.7               |
| 55-64              | 861      | 77.6    | 74.6-80.6               |
| 65+                | 1004     | 84.0    | 81.5-86.5               |
| Education          |          |         |                         |
| Less than H.S.     | 336      | 62.9    | 56.6-69.3               |
| H.S. or G.E.D.     | 1444     | 63.0    | 59.9-66.1               |
| Some post-H.S.     | 1254     | 62.4    | 59.1-65.8               |
| College graduate   | 1958     | 71.7    | 69.4-74.0               |
| Household income   |          |         |                         |
| Less than \$15,000 | 381      | 52.8    | 46.5-59.1               |
| \$15,000- 24,999   | 606      | 60.8    | 55.9-65.7               |
| \$25,000- 34,999   | 497      | 66.5    | 61.1-72.0               |
| \$35,000- 49,999   | 751      | 61.9    | 57.6-66.1               |
| \$50,000- 74,999   | 896      | 68.5    | 64.9-72.1               |
| \$75,000+          | 1254     | 70.5    | 67.5-73.5               |

 Table 3-2.
 Proportion Of NH Adults Reporting They Had Good Mental Health On

 All Of The Past 30 Days, By Demographic Characteristics, 2004 NH BRFSS

FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

Table 3-3 examines the proportion of NH adults rating their mental health as good for all of the previous thirty days in the 2001, 2003 and 2004 NH BRFSS. Approximately two-thirds of NH adults reported no bad mental health days during the most recent 30 days for all three years. There was no significant change between these years. This question was not asked in 2002.

Table 3-3. Proportion Of NH Adults Experiencing No Bad Mental Health Days In The Past 30 Days, 2001 - 2004 NH BRFSS

|      | Total       |         |                         |
|------|-------------|---------|-------------------------|
| Year | Sample Size | Percent | 95% Confidence Interval |
| 2001 | 3997        | 66.3    | 64.5-68.0               |
| 2002 | NA          | NA      | NA                      |
| 2003 | 4974        | 67.1    | 65.6-68.7               |
| 2004 | 4998        | 66.2    | 64.6-67.8               |

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

#### For more information about mental health services in

#### New Hampshire, contact:

The Bureau of Behavioral Health

1-800-852-3345, ext. 5000 (in New Hampshire) or

www.dhhs.nh.gov/DHHS/BBH/

#### 4. Disability

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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 2004, 18.3% (95% CI: 17.1-19.5) of NH adults reported they were experiencing some limitation as a result of these types of problems. Figure 4-1 and Table 4-1 examine the proportion of NH adults experiencing disabilities during 2004 by demographic characteristics.

- **Gender Differences:** There were no significant differences by gender in the proportion of NH adults experiencing health-related limitations in 2004.
- Age Differences: Older adults in NH were significantly more likely to experience disabilities than younger adults.
- Educational Differences: Adults with less education were more likely to report they experienced health-related limitations. (Figure 4-1)
- **Income Differences:** NH adults with incomes of \$25,000 or less were significantly more likely to report experiencing activity limitations than adults with incomes of \$50,000 or more.

#### Figure 4-1. NH Adults Limited In Any Way In Any Activities Because Of Physical, Mental, Or Emotional Problems, By Level Of Education, 2004, NH BRFSS



FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

|                    | Sample Size |         |                         |
|--------------------|-------------|---------|-------------------------|
| Characteristic     | (N)         | Percent | 95% Confidence Interval |
| Total              | 4904        | 18.3    | 17.1-19.5               |
| Sex                |             |         |                         |
| Male               | 2030        | 17.1    | 15.2-18.9               |
| Female             | 2874        | 19.5    | 17.9-21.1               |
| Age                |             |         |                         |
| 18-24              | 231         | 11.5    | 7.3-15.8                |
| 25-34              | 614         | 8.2     | 5.8-10.6                |
| 35-44              | 1021        | 14.5    | 12.0-17.0               |
| 45-54              | 1156        | 20.9    | 18.2-23.6               |
| 55-64              | 860         | 25.7    | 22.6-28.9               |
| 65+                | 981         | 29.5    | 26.4-32.6               |
| Education          |             |         |                         |
| Less than H.S.     | 339         | 28.5    | 22.9-34.0               |
| H.S. or G.E.D.     | 1407        | 20.0    | 17.6-22.4               |
| Some post-H.S.     | 1228        | 20.6    | 18.0-23.1               |
| College graduate   | 1923        | 13.6    | 12.0-15.3               |
| Household income   |             |         |                         |
| Less than \$15,000 | 381         | 47.6    | 41.6-53.6               |
| \$15,000- 24,999   | 598         | 30.1    | 25.7-34.5               |
| \$25,000- 34,999   | 487         | 19.5    | 15.4-23.7               |
| \$35,000- 49,999   | 741         | 18.7    | 15.4-22.0               |
| \$50,000- 74,999   | 884         | 12.8    | 10.5-15.2               |
| \$75,000+          | 1227        | 9.4     | 7.6-11.1                |

Table 4-1. NH Adults Limited In Any Way In Any Activities Because Of Physical, Mental, Or Emotional Problems, 2004, NH BRFSS

Figure 4-2 and Table 4-2 examine the proportion of NH adults who experienced limitations because of physical mental or emotional problems for the years 2001, 2003 and 2004. There was a significant increase between 2001 and 2003 in the proportion of NH adults experiencing limitations due to health problems. This question was not asked in 2002.

#### Figure 4-2 NH Adults Limited In Any Way In Any Activities Because Of Physical, Mental, Or Emotional Problems, 2001, 2003, 2004, NH BRFSS



Table 4-2. NH Adults Who Were Limited In Any Way In Any Activities Because Of Physical, Mental, Or Emotional Problems, 2001 – 2004, NH BRFSS

|      | Total       |         |                         |
|------|-------------|---------|-------------------------|
| Year | Sample Size | Percent | 95% Confidence Interval |
| 2001 | 4040        | 14.8    | 13.6-15.9               |
| 2002 | NA          | NA      | NA                      |
| 2003 | 4970        | 19.4    | 18.2-20.6               |
| 2004 | 4904        | 18.3    | 17.1-19.5               |

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

FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

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 2004, 5.1% (95% CI: 4.4-5.7) used some type of special equipment as a result of a health problem. Figure 4-3 and Table 4-3 examine the prevalence of use of special equipment by demographic characteristics.

- **Gender Differences:** There were no significant differences by gender in the proportion of NH adults using special equipment as a result of a health problem.
- Age Differences: Older adults in NH were significantly more likely to use special equipment as a result of a health problem than younger adults. (Figure 4-3)
- Educational Differences: NH adults with less education were significantly more likely to use special equipment as a result of a health problem than adults with more education. NH adults with less than a high school education were more than twice as likely as college graduates to require use of some type of special health equipment.
- **Income Differences:** NH adults at lower incomes were significantly more likely to require the use of special equipment as a result of a health problem than adults at higher incomes.

# Figure 4-3. 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 Age, 2004 NH BRFSS



FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

| Characteristic     | Sample Size (N) | Percent | 95% Confidence<br>Interval |
|--------------------|-----------------|---------|----------------------------|
| Total              | 4925            | 5.1     | 4.4-5.7                    |
| Sex                |                 |         |                            |
| Male               | 2041            | 4.7     | 3.8-5.7                    |
| Female             | 2884            | 5.4     | 4.5-6.2                    |
| Age                |                 |         |                            |
| 18-24              | 233             | 1.0     | 0.0-2.5                    |
| 25-34              | 616             | 0.7     | 0.0-1.3                    |
| 35-44              | 1024            | 1.4     | 0.7-2.1                    |
| 45-54              | 1158            | 5.8     | 4.2-7.4                    |
| 55-64              | 863             | 7.4     | 5.5-9.2                    |
| 65+                | 990             | 14.9    | 12.4-17.3                  |
| Education          |                 |         |                            |
| Less than H.S.     | 343             | 8.0     | 5.2-10.8                   |
| H.S. or G.E.D.     | 1413            | 6.6     | 5.1-8.0                    |
| Some post-H.S.     | 1231            | 5.3     | 4.1-6.6                    |
| College graduate   | 1931            | 3.1     | 2.3-3.9                    |
| Household income   |                 |         |                            |
| Less than \$15,000 | 382             | 18.8    | 14.7-22.9                  |
| \$15,000- 24,999   | 601             | 7.7     | 5.5-9.8                    |
| \$25,000- 34,999   | 491             | 7.8     | 4.9-10.7                   |
| \$35,000- 49,999   | 744             | 3.4     | 2.2-4.7                    |
| \$50,000- 74,999   | 885             | 1.9     | 1.0-2.7                    |
| \$75,000+          | 1230            | 2.3     | 1.4-3.2                    |

Table 4-3. 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 Age, 2004 NH BRFSS

Table 4-4 represents the proportion of NH adults using special equipment as a result of a health problem for the years 2001, 2003 and 2004. There were no significant changes in the proportion of NH adults using special equipment as a result of health problems. This question was not asked in 2002.

# Table 4-4. Percentage Of NH Adults Using Special Equipment, Such As A Cane, A Wheelchair, A Special Bed, Or A Special Telephone, As The Result Of A Health Problem, 2001 - 2004 NH BRFSS

|      | l otal      |         |                         |
|------|-------------|---------|-------------------------|
| Year | Sample Size | Percent | 95% Confidence Interval |
| 2001 | 4045        | 3.9     | 3.3-4.6                 |
| 2002 | NA          | NA      | NA                      |
| 2003 | 4975        | 5.3     | 4.3-5.9                 |
| 2004 | 4925        | 5.1     | 4.4-5.7                 |

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

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FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004

NH Department of Health and Human Services Division of Public Health Services

Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

February 2007

Healthy New Hampshire 2010 (HNH2010) addressed activity limitations related to back or neck problems in the following objective. HNH2010 reported that back pain was the most frequent reason for physician visits nationally and that back problems could be prevented or reduced with exercise, maintenance of a healthy weight, and with changes in home and work environments. <sup>5</sup>

The BRFSS question measuring this objective was most recently asked in the year 2000. At that time, 3.0% (95% CI: 2.1 - 4.0) of NH adults reported activity limitations due to back or neck problems.<sup>4</sup>



HNH2010 Objective: Reduce the percentage of adults who experience activity limitations due to back or neck problems.

| Target          | 2.0% |
|-----------------|------|
| Baseline (1997) | 3.2% |

### Health Care Access and Usage

#### 5. Access to Health Care

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.<sup>5</sup> 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".<sup>5</sup> 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.

Three measures of health care access are summarized in Table 5-1 and Figure 5-1: no health care coverage currently; not having a personal health care provider and; needing to see a doctor but being unable to afford medical care in the previous year. In 2004, 12% (95% CI: 11.0 - 13.3) of NH adults reported having no health insurance, 10.6% reported cost as a barrier to obtaining a needed doctor visit, and 12.4% (95% CI: 11.2 - 13.6) reported not having a personal health care provider. (Table 5-1)

#### Figure 5-1. Summary Of Health Care Access Measures, 2004 NH BRFSS





| Measure                            | Sample<br>Size (N) | Percent | 95 % Confidence<br>Interval |
|------------------------------------|--------------------|---------|-----------------------------|
| No health care coverage            | 5055               | 12.1    | 11.0 – 13.3                 |
| No personal health care provider   | 5059               | 12.4    | 11.2 – 13.6                 |
| Needed to see doctor but could not | 5059               | 10.6    | 9.5 – 11.7                  |
| afford to, past 12 months          |                    |         |                             |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each measure of health care access.

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FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services

Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

The percentage of NH adults reporting no health insurance coverage during the previous year differed by gender, age, education and income categories. (Table 5-2)

- **Gender Differences:** Males were significantly more likely than females to be without health care coverage.
- Age Differences: A significantly higher percentage of younger adults were without coverage than older adults. More than a quarter of NH adults aged 18-24 were without coverage in 2004. (Figure 5-2)
- Educational Differences: More than one-third of adults with less than a high school education were without health care insurance. These adults were significantly more likely to be uninsured than those with higher levels of education.
- **Income Differences:** Adults with lower incomes were significantly more likely to be without health care coverage than those at higher incomes.

## Figure 5-2. Proportion Of NH Adults With No Health Care Coverage, By Age, 2004 NH BRFSS



FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

| Characteristic     | Sample Size (N) | Percent | 95% Confidence Interval |
|--------------------|-----------------|---------|-------------------------|
| Total              | 5055            | 12.1    | 11.0-13.3               |
| Sex                |                 |         |                         |
| Male               | 2103            | 14.4    | 12.4-16.3               |
| Female             | 2952            | 10.0    | 8.7-11.3                |
| Age                |                 |         |                         |
| 18-24              | 238             | 29.2    | 22.9-35.4               |
| 25-34              | 630             | 14.1    | 11.2-17.0               |
| 35-44              | 1057            | 12.3    | 10.1-14.6               |
| 45-54              | 1192            | 10.7    | 8.7-12.6                |
| 55-64              | 872             | 8.8     | 6.8-10.8                |
| 65+                | 1019            | 2.0     | 1.0-2.9                 |
| Education          |                 |         |                         |
| Less than H.S.     | 347             | 33.7    | 27.4-40.0               |
| H.S. or G.E.D.     | 1465            | 15.6    | 13.2-18.1               |
| Some post-H.S.     | 1263            | 11.3    | 9.1-13.4                |
| College graduate   | 1974            | 5.8     | 4.5-7.0                 |
| Household income   |                 |         |                         |
| Less than \$15,000 | 391             | 25.1    | 19.7-30.6               |
| \$15,000- 24,999   | 614             | 26.7    | 22.1-31.3               |
| \$25,000- 34,999   | 503             | 24.8    | 19.6-30.0               |
| \$35,000- 49,999   | 760             | 11.2    | 8.4-14.1                |
| \$50,000- 74,999   | 903             | 6.4     | 4.4-8.4                 |
| \$75,000+          | 1258            | 3.6     | 2.2-5.1                 |

Table 5-2. Proportion of NH Adults With No Health Care Coverage, By Demographic Characteristics, 2004 NH BRFSS

Table 5-3 examines the proportion of NH adults who had no health care coverage for the years 2001 and 2004. There was no significant change between 2001 and 2004.

Table 5-3. NH Adults Without Some Type Of Health Care Coverage, 2001 – 2004, NH BRFSS

|      | Total       |         |                         |
|------|-------------|---------|-------------------------|
| Year | Sample Size | Percent | 95% Confidence Interval |
| 2001 | 4516        | 11.5    | 10.3 – 12.7             |
| 2002 | 4485        | 11.8    | 10.7 – 12.9             |
| 2003 | 4511        | 11.9    | 10.8 – 13.0             |
| 2004 | 5055        | 12.1    | 11.0 – 13.3             |

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

FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

One indicator of the accessibility of health care is the proportion of individuals who cannot get health care because of cost. In 2004, 10.6% (95% CI: 9.6-11.7) of NH adults needed a doctor but could not see one because of cost. The proportion of NH adults unable to afford needed health care varied by age, level of education and income. Demographic patterns were similar to those of health care coverage on page 32, with the exception of gender differences which were not seen with the cost barrier. Figure 5-4 and Table 5.4 examine the proportion of NH adults not getting needed care in the past year because of cost by gender, age, income and education.

#### Figure 5-4. Needed But Could Not See Doctor Because Of Cost In Past 12 Months, By Age, 2004 NH BRFSS



- **Gender Differences:** The prevalence of males encountering cost barriers to needed health care was not significantly different from that of females in 2004.
- Age Differences: Younger adults were significantly more likely to have financial barriers to needed health care than older adults. Twenty percent of adults aged 18 to 24 years needed health care but were unable to get it because of cost.
- Educational Differences: Adults with less than a high school education were significantly more likely to face cost barriers to needed health care than adults with higher levels of education.
- **Income Differences:** Adults with lower incomes were significantly more likely to have needed a doctor but would not have been able to see one due to cost.

|                    |                 |         | 95% Confidence |
|--------------------|-----------------|---------|----------------|
| Characteristic     | Sample Size (N) | Percent | Interval       |
| Total              | 5059            | 10.6    | 9.6-11.7       |
| Sex                |                 |         |                |
| Male               | 2103            | 10.2    | 8.5-11.9       |
| Female             | 2956            | 11.0    | 9.6-12.4       |
| Age                |                 |         |                |
| 18-24              | 242             | 19.5    | 14.1-25.0      |
| 25-34              | 631             | 13.7    | 10.5-16.9      |
| 35-44              | 1055            | 10.6    | 8.5-12.6       |
| 45-54              | 1191            | 8.9     | 7.2-10.6       |
| 55-64              | 871             | 7.8     | 5.9-9.6        |
| 65+                | 1021            | 5.6     | 3.9-7.3        |
| Education          |                 |         |                |
| Less than H.S.     | 351             | 22.6    | 17.4-27.8      |
| H.S. or G.E.D.     | 1464            | 11.9    | 9.8-14.0       |
| Some post-H.S.     | 1264            | 12.5    | 10.2-14.9      |
| College graduate   | 1973            | 6.0     | 4.7-7.4        |
| Household income   |                 |         |                |
| Less than \$15,000 | 392             | 24.0    | 19.2-28.9      |
| \$15,000- 24,999   | 613             | 25.3    | 20.8-29.8      |
| \$25,000- 34,999   | 504             | 18.1    | 13.7-22.4      |
| \$35,000- 49,999   | 760             | 8.8     | 6.3-11.2       |
| \$50,000- 74,999   | 904             | 6.4     | 3.9-8.9        |
| \$75,000+          | 1258            | 3.1     | 1.9-4.4        |

Table 5-4. Needed But Could Not See Doctor Because Of Cost In Past 12 Months, 2004 NH BRFSS

NH adults were more likely to face a cost barrier to needed health care if they were without some type of health insurance. In 2004, 43.0% (95% CI: 37.8 - 48.2) of NH adults without health insurance reported being unable to see a doctor because of cost, while 6.2% (95% CI: 5.3 - 7.1) of NH adults with health insurance reported going without health care because of cost. (Table 5.5)

| Tak | ble 5-5. Percentage Of NH Adults Who Could Not See A Doctor | <b>Because Of Cost</b> |
|-----|---|------------------------|
| By  | Health Insurance Status, 2004 NH BRFSS                      |                        |

| Health insurance | Could not afford<br>health care due to<br>cost | Sample(N) | Percent | 95% Confidence<br>Interval |
|------------------|--|-----------|---------|----------------------------|
| Yes              | Yes  | 275       | 6.2     | 5.3-7.1                    |
|                  | No   | 4238      | 93.8    | 92.9-94.7                  |
| No               | Yes  | 234       | 43.0    | 37.8-48.2                  |
|                  | No   | 302       | 57.0    | 51.8-62.2                  |

Percentages in this table add to 100% because they represent the proportion of all respondents answering the questions about health insurance and a cost barrier.

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FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services

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Table 5-6 represents the proportion of NH adults who needed a doctor but could not see one because of cost in the previous twelve months for 2003 and 2004. This question was not asked in 2001 or 2002. There was no significant change in the proportion of adults unable to afford a needed doctor visit from 2003 and 2004.

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | NA              | NA      | NA                      |
| 2002 | NA              | NA      | NA                      |
| 2003 | 445             | 9.3     | 8.3-10.2                |
| 2004 | 510             | 10.6    | 9.6 – 11.7              |

 Table 5-6. Needed But Could Not See Doctor Because Of Cost In Past 12 Months,

 2003, 2004 NH BRFSS

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

### Health Behaviors

#### 6. Oral Health

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In 2000, the Office of the U.S. Surgeon General released the report "Oral Health in America, A Report of the Surgeon General".<sup>6</sup> A National Call to Action to Promote Oral Health followed this in 2003.<sup>7</sup>

The report notes that while oral disease includes tooth decay, gum disease, jaw joint problems and cancers of the mouth and throat, oral health means more than healthy teeth.<sup>6</sup> The report defines oral health as "being free of chronic oral-facial pain conditions, oral and pharyngeal (throat) cancers, oral soft tissue lesions, birth defects such as cleft lip and palate, and scores of other diseases and disorders that affect the oral, dental, and craniofacial tissues, collectively known as the craniofacial complex".<sup>6</sup>

Methods recommended for preventing oral disease include: use of fluoride in a dentifrice, community water supplies, mouth rinses and tablets; use of tooth sealants; good oral hygiene including tooth brushing and flossing; appropriate use of professional dental services; avoidance of tobacco use; reduction in alcohol use and use of sun screen and lip protector.<sup>6</sup>

The BRFSS asks adults about their history of tooth loss and access to dental health providers. In 2004, 42.5% (95% CI: 40.9-44.1) of NH adults reported they had not lost any permanent teeth as a result of tooth decay or gum disease. (Table 6-1) The proportion of NH adults who reported tooth loss due to oral disease varied by age, education and income. (Table 6-2)

- **Gender Differences:** There were no significant differences between men and women in the proportion of NH adults with tooth loss.
- Age Differences: Older NH adults were significantly more likely to have lost one or more teeth due to decay than younger adults. Seventy-six percent of NH adults aged 65 and older have lost one or more permanent teeth due to oral disease.
- Educational Differences: NH adults with less education were significantly more likely to have lost one or more teeth due to decay or gum disease than adults with more education. NH adults with less than a high school education were more than twice as likely to have lost teeth due to oral disease than NH adults with a college degree.
- **Income Differences:** NH adults with lower incomes were significantly more likely to have experienced tooth loss than adults with higher incomes. (Figure 6-1)





 Table 6-1. Proportion Of NH Adults Who Have Lost One Or More Permanent

 Teeth As A Result Of Decay Or Disease, 2004 NH BRFSS

|                       | Number of   |         | 95% Confidence |
|-----------------------|-------------|---------|----------------|
| Characteristic        | Respondents | Percent | Interval       |
| Total                 | 4980        | 42.5    | 40.9-44.1      |
| Sex                   |             |         |                |
| Male                  | 2078        | 42.3    | 39.9-44.8      |
| Female                | 2902        | 42.6    | 40.6-44.7      |
| Age                   |             |         |                |
| 18-24                 | 242         | 8.1     | 4.5-11.6       |
| 25-34                 | 630         | 19.8    | 16.4-23.1      |
| 35-44                 | 1055        | 34.4    | 31.2-37.7      |
| 45-54                 | 1179        | 50.8    | 47.7-54.0      |
| 55-64                 | 861         | 63.5    | 60.0-67.0      |
| 65+                   | 969         | 76.4    | 73.3-79.5      |
| Education             |             |         |                |
| Less than high school | 339         | 65.1    | 58.5-71.8      |
| High School or G.E.D. | 1425        | 52.5    | 49.4-55.6      |
| Some post high school | 1252        | 42.1    | 38.9-45.2      |
| College graduate      | 1957        | 30.6    | 28.4-32.9      |
| Household income      |             |         |                |
| Less than \$15,000    | 383         | 69.0    | 62.4-75.6      |
| \$15,000- 24,999      | 602         | 53.7    | 48.8-58.6      |
| \$25,000- 34,999      | 495         | 48.7    | 43.3-54.1      |
| \$35,000- 49,999      | 750         | 46.3    | 42.1-50.4      |
| \$50,000- 74,999      | 901         | 37.7    | 34.2-41.2      |
| \$75,000+             | 1254        | 29.7    | 26.9-32.4      |

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Table 6-2 displays the proportion of NH adults who have lost one or more permanent teeth as a result of decay or disease by year. The proportion of NH adults reporting tooth loss in 2004 was significantly lower than in 2001. This finding should be interpreted with caution since the prevalence of adult tooth loss changes slowly over time. Additional years of data will be needed to determine if this change is part of a long-term trend.

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | 3886            | 47.2    | 45.4-49.0               |
| 2002 | 4938            | 44.7    | 43.1-46.3               |
| 2003 | 4765            | 45.3    | 43.6-46.9               |
| 2004 | 4980            | 42.5    | 40 9-44 1               |

Table 6-2. Proportion Of NH Adults Who Have Lost One Or More PermanentTeeth As A Result Of Decay Or Disease, 2001-2004 NH BRFSS

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

Regular visits to a dental practitioner are an important part of maintaining good oral health.<sup>6</sup> In NH, seven of the ten counties were Federally Designated Dental Health Professional Shortage Areas in 2006. The BRFSS asks adults about their history of and access to dental care. In 2004, 76.2% (95% CI: 74.8-77.6) of NH adults reported visiting a dentist or dental clinic for some reason in the previous twelve months. (Table 6-3)

The proportion of NH adults that visited a dentist or dental clinic in the previous year varied by age, education and income. (Table 6-3)

- Gender Differences: There was no significant difference in the proportion of men and women who saw a dentist in the past 12 months.
- Age Differences: Older adults, aged 65 and over and younger adults, aged 18 to 24 were less likely to have visited a dentist or dental clinic in the previous 12 months than middle-aged adults aged 45 to 54. (Figure 6-2)
- Educational Differences: Adults with less than a high school education were significantly less likely to have visited a dentist in the past year than adults with higher levels of education.
- **Income Differences:** Adults with incomes less than \$35,000 were significantly less likely to have visited a dental clinic in the past 12 months than adults with incomes \$35,000 or more.




Table 6-3. Proportion Of NH Adults Who Visited A Dentist Or Dental Clinic For Any Reason In The Past 12 Months, By Demographic Characteristics, 2004 NH BRFSS

|                       | Number of   |         | 95% Confidence Interval |
|-----------------------|-------------|---------|-------------------------|
| Characteristic        | Respondents | Percent |                         |
| Total                 | 5034        | 76.2    | 74.8-77.6               |
| Sex                   |             |         |                         |
| Male                  | 2090        | 74.5    | 72.2-76.7               |
| Female                | 2944        | 77.9    | 76.2-79.7               |
| Age                   |             |         |                         |
| 18-24                 | 238         | 70.5    | 64.3-76.8               |
| 25-34                 | 628         | 73.4    | 69.5-77.3               |
| 35-44                 | 1055        | 79.5    | 76.7-82.3               |
| 45-54                 | 1192        | 81.6    | 79.1-84.1               |
| 55-64                 | 865         | 76.7    | 73.5-79.8               |
| 65+                   | 1009        | 71.3    | 68.2-74.4               |
| Education             |             |         |                         |
| Less than high school | 344         | 42.5    | 36.2-48.9               |
| High School or G.E.D. | 1456        | 71.8    | 69.0-74.5               |
| Some post high school | 1261        | 76.9    | 74.1-79.8               |
| College graduate      | 1966        | 85.8    | 84.0-87.6               |
| Household income      |             |         |                         |
| Less than \$15,000    | 389         | 47.1    | 40.8-53.3               |
| \$15,000- 24,999      | 606         | 55.7    | 50.8-60.5               |
| \$25,000- 34,999      | 502         | 65.1    | 59.9-70.4               |
| \$35,000- 49,999      | 758         | 77.9    | 74.3-81.4               |
| \$50,000- 74,999      | 901         | 84.5    | 81.9-87.2               |
| \$75,000+             | 1258        | 88.3    | 86.1-90.5               |

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#### FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services

Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section In 2001, respondents who had not visited a dentist in the past twelve months were asked what the main reason was. A third (33%, 95% CI: 29.2 - 36.2) said they thought they had no reason to see a dentist and 27.9% (95% CI: 24.3 - 31.5) said they could not afford a dental visit. (Table 6-4)

| Table 6-4. Reasons Given By NH Adults For Not Visiting A Dentist In TI | he |
|--|----|
| Previous 12 Months, 2001 NH BRFSS                                      |    |

| Characteristic                   | Number of<br>Respondents | Percent | 95% Confidence<br>Interval |
|----------------------------------|--------------------------|---------|----------------------------|
| Fear, apprehension, nervousness, |                          |         |                            |
| pain                             | 72                       | 7.4     | 5.5-9.3                    |
| Cost                             | 224                      | 27.9    | 24.3-31.5                  |
| Do not have/know a dentist       | 37                       | 4.0     | 2.6-5.5                    |
| Cannot get to office/clinic      | 23                       | 2.3     | 1.3-3.3                    |
| No reason to go                  | 299                      | 32.7    | 29.2-36.2                  |
| Other priorities                 | 51                       | 5.8     | 4.0-7.6                    |
| Have not thought of it           | 35                       | 4.5     | 2.8-6.2                    |
| Other                            | 138                      | 15.4    | 12.5-18.2                  |

Percentages in this table add up to 100% because each estimate represents the percentage of respondent s answering the question about their main reason for not visiting a dentist.

In 2001, NH adults were also asked if they had any kind of insurance coverage that pays for some or all of their routine dental care, including dental insurance, prepaid plans such as HMOs or government plans such as Medicaid. In 2001, 60.3% (95% CI: 58.6 - 62.0) of NH adults had some kind of dental coverage.

For information about Oral Health, contact the DHHS Oral Health Program at: 800-852-3345 x4741

http://www.dhhs.state.nh.us/DHHS/RHPC/oral-health.htm

or visit the CDC Oral Health Program web site: http://www.cdc.gov/OralHealth/index.htm

#### 7. Tobacco Use

In 2004, the U.S. Surgeon General issued a report titled "The Health Consequences of Smoking".<sup>8</sup> The report found 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". <sup>8</sup> It 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.<sup>8</sup> 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. <sup>8</sup>

In 2004, the NH BRFSS found that 21.7% (95% CI: 20.3-23.1) of NH adults were current cigarette smokers (Table 7-2). Of these, 16.5% (95% CI: 15.3 - 17.80 smoked everyday and 5.1% (95% CI: 4.3 - 6.0) smoked only on some days (Table 7-1).

Most tobacco users began using tobacco when they were adolescents. In 2003, 78% of NH adults who had ever smoked reported they had tried their first cigarette before they were 18 years old (95% CI: 76.7 - 80.3).

#### Figure 7-1. Smoking Status Among New Hampshire Adults, 2004 NH BRFSS





| Smoking status  | Sample Size (N) | Percent | 95 % Confidence Interval |
|-----------------|-----------------|---------|--------------------------|
| Smoke everyday  | 789             | 16.5    | 15.3 – 17.8              |
| Smoke some days | 222             | 5.1     | 4.3 - 6.0                |
| Former smoker   | 1601            | 28.5    | 27.1 – 29.9              |
| Never smoked    | 2430            | 49.8    | 48.2 - 51.4              |

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Percentages in this table add to 100% because each estimate represents the percentage of respondents answering the questions regarding smoking.

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Smoking prevalence varies by gender, age, education and income. Table 7-2 examines cigarette smoking among NH adults in 2004 by demographic characteristics.

- **Gender Differences:** In 2004, NH men were significantly more likely to be cigarette smokers than women.
- Age Differences: Young adults were significantly more likely to be current smokers than older adults. More than a third of 18-24 year old adults were current smokers in 2004. (Figure 7-2)
- Educational Differences: The prevalence of smoking decreased as educational levels increased. Forty-five percent of adults without a high school diploma were current smokers compared to 10% of college graduates.
- **Income Differences:** Adults with lower incomes were significantly more likely to smoke than those with higher incomes.

# Figure 7-2. Prevalence Of Current Smoking Among NH Adults, By Age, 2004 NH BRFSS



| Characteristic     | Sample Size (N) | Percent | 95% Confidence<br>Interval |
|--------------------|-----------------|---------|----------------------------|
| Total              | 5042            | 21.7    | 20.3-23.1                  |
| Sex                |                 |         |                            |
| Male               | 2099            | 23.8    | 21.6-26.1                  |
| Female             | 2943            | 19.6    | 17.9-21.4                  |
| Age                |                 |         |                            |
| 18-24              | 241             | 34.9    | 28.4-41.5                  |
| 25-34              | 630             | 27.1    | 23.2-31.0                  |
| 35-44              | 1054            | 23.9    | 21.0-26.9                  |
| 45-54              | 1190            | 20.2    | 17.6-22.8                  |
| 55-64              | 865             | 17.2    | 14.5-19.9                  |
| 65+                | 1015            | 9.3     | 7.4-11.3                   |
| Education          |                 |         |                            |
| Less than H.S.     | 347             | 44.9    | 38.5-51.4                  |
| H.S. or G.E.D.     | 1459            | 30.8    | 27.9-33.7                  |
| Some post-H.S.     | 1261            | 21.5    | 18.8-24.3                  |
| College graduate   | 1968            | 10.1    | 8.5-11.8                   |
| Household income   |                 |         |                            |
| Less than \$15,000 | 393             | 37.9    | 31.5-44.3                  |
| \$15,000- 24,999   | 609             | 35.6    | 30.8-40.5                  |
| \$25,000- 34,999   | 502             | 32.2    | 26.9-37.4                  |
| \$35,000- 49,999   | 756             | 22.2    | 18.4-25.9                  |
| \$50,000- 74,999   | 903             | 18.5    | 15.6-21.5                  |
| \$75,000+          | 1254            | 12.8    | 10.5-15.1                  |

Table 7-2. Prevalence Of Current Smoking Among NH Adults, By Demographic Characteristics, 2004 NH BRFSS

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." <sup>8</sup>

In 2004, 53% (95% CI: 49.0-57.5) of NH adults who smoked everyday had 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.<sup>9</sup> In 2003, 82.6% (95% CI: 79 - 86.1) of NH adult smokers who had seen a health care professional in the past year had been advised to quit by their provider.

Table 7-3 displays the prevalence of current smoking among NH adults for the years 2001 through 2004. There were no significant differences in smoking prevalence for these years.

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | 4054            | 24.1    | 22.6-25.6               |
| 2002 | 5021            | 23.2    | 21.8-24.6               |
| 2003 | 5031            | 21.2    | 19.8-22.6               |
| 2004 | 5042            | 21.7    | 20.3-23.1               |

| Table 7-3. Cutteni Ciuatelle Shiokinu. 2001-2004 NH DRESS | Table 7-3. | Current | Cigarette | Smokina. | 2001- | <b>2004 NH BRFSS</b> |
|---|------------|---------|-----------|----------|-------|----------------------|
|---|------------|---------|-----------|----------|-------|----------------------|

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

Smoke escaping from burning cigarettes and exhaled by smokers also endangers the health of non-smokers exposed to it. A 2006 report of the U.S. Surgeon General concluded:<sup>10</sup>

- Involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers.
- The children of parents who smoke have an increased frequency of respiratory infections, increased respiratory symptoms, and slightly smaller rates of increase in lung function as the lung matures when compared with the children of non-smoking parents.
- The simple separation of smokers and non-smokers within the same air space may reduce, but does not eliminate, the exposure of non-smokers to environmental tobacco smoke.

One way of avoiding exposure to secondhand smoke is for adults to establish rules in their homes prohibiting smoking indoors. <sup>9</sup>

The BRFSS asks adults about rules in their homes regarding indoor smoking. In 2003, 73.1% (95% CI: 71.6-74.5) of NH adults said they had rules against smoking anywhere indoors. Table 7-4 represents the proportion of NH adults with home rules against indoor smoking by demographic characteristics. The proportion of NH adults who reported living in homes with rules against smoking anywhere indoors varied by age, education and income.

- **Gender Differences:** There were no significant differences in the prevalence of adults with smoke-free rules by gender.
- Age Differences: Adults aged 25 to 34 years were significantly more likely than adults aged 65 and older to report living in smoke-free homes.
- Educational Differences: NH adults with more education were significantly more likely to have rules against smoking anywhere in their homes than NH adults with less education.
- **Income Differences:** NH adults at higher incomes were significantly more likely to have rules against smoking anywhere in their homes than NH adults at lower incomes. (Figure 7-3)

### Figure 7-3. Proportion Of NH Adults With Rules Against Smoking Anywhere Indoors, By Income, 2003 NH BRFSS



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| Characteristic     | Sample Size (N) | Percent | 95% Confidence<br>Interval |
|--------------------|-----------------|---------|----------------------------|
| Total              | 4826            | 73.1    | 71.6-74.5                  |
| Sex                |                 |         |                            |
| Male               | 1958            | 72.0    | 69.7-74.2                  |
| Female             | 2868            | 74.1    | 72.2-76.0                  |
| Age                |                 |         |                            |
| 18-24              | 237             | 74.4    | 68.2-80.5                  |
| 25-34              | 667             | 81.5    | 78.3-84.7                  |
| 35-44              | 1050            | 74.4    | 71.5-77.3                  |
| 45-54              | 1130            | 72.3    | 69.4-75.2                  |
| 55-64              | 797             | 69.4    | 65.9-72.9                  |
| 65+                | 878             | 66.4    | 63.0-69.8                  |
| Education          |                 |         |                            |
| Less than H.S.     | 313             | 56.0    | 49.6-62.5                  |
| H.S. or G.E.D.     | 1358            | 65.6    | 62.7-68.6                  |
| Some post-H.S.     | 1260            | 72.2    | 69.3-75.1                  |
| College graduate   | 1886            | 82.8    | 80.9-84.7                  |
| Household income   |                 |         |                            |
| Less than \$15,000 | 349             | 61.3    | 55.4-67.2                  |
| \$15,000- 24,999   | 558             | 64.6    | 60.0-69.2                  |
| \$25,000- 34,999   | 520             | 71.6    | 67.2-76.1                  |
| \$35,000- 49,999   | 821             | 67.3    | 63.5-71.0                  |
| \$50,000- 74,999   | 879             | 75.3    | 72.0-78.7                  |
| \$75,000+          | 1139            | 82.2    | 79.6-84.9                  |

Table 7-4. Proportion Of NH Adults With Rules Against Smoking Anywhere Indoors, By Demographic Characteristics, 2003 NH BRFSS

In 2003, the BRFSS asked NH adults who currently smoked or who had recently quit smoking and had seen a health care provider in the past 12 months, if they had been advised to quit by a health care provider. Table 7-5 represents the proportion of NH adults currently smoking or who recently quit that were advised to quit by a health care provider, by demographic characteristics.

- **Gender Differences:** There were no significant differences by gender in the proportion of NH adult smokers advised to quit by a health care provider.
- **Age Differences:** There were no significant differences by age in the proportion of NH adult smokers advised to quit by a health care provider.
- Educational Differences: There were no significant differences by education in the proportion of NH adult smokers advised to quit by a health care provider.
- **Income Differences:** There were no significant differences by income in the proportion of NH adult smokers advised to quit by a health care provider.

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|                    |                 |         | 95% Confidence |
|--------------------|-----------------|---------|----------------|
| Characteristic     | Sample Size (N) | Percent | Interval       |
| Total              | 756             | 79.6    | 76.1-83.1      |
| Sex                |                 |         |                |
| Male               | 259             | 78.4    | 72.8-84.0      |
| Female             | 497             | 80.3    | 75.8-84.9      |
| Age                |                 |         |                |
| 18-24              | 45              | 81.0    | 67.4-94.6      |
| 25-34              | 136             | 76.4    | 68.5-84.4      |
| 35-44              | 183             | 82.3    | 76.3-88.4      |
| 45-54              | 204             | 81.9    | 75.9-87.9      |
| 55-64              | 106             | 70.5    | 60.8-80.2      |
| 65+                | 72              | 80.0    | 70.8-89.3      |
| Education          |                 |         |                |
| Less than H.S.     | 72              | 89.1    | 80.1-98.2      |
| H.S. or G.E.D.     | 293             | 83.1    | 78.3-88.0      |
| Some post- H.S.    | 220             | 74.7    | 66.9-82.4      |
| College graduate   | 170             | 74.7    | 67.4-82.1      |
| Household income   |                 |         |                |
| Less than \$15,000 | 88              | 84.8    | 76.2-93.3      |
| \$15,000- 24,999   | 116             | 77.0    | 65.6-88.3      |
| \$25,000- 34,999   | 91              | 86.4    | 78.2-94.5      |
| \$35,000- 49,999   | 153             | 78.2    | 70.7-85.7      |
| \$50,000- 74,999   | 132             | 75.8    | 67.9-83.7      |
| \$75,000+          | 108             | 77.1    | 67.4-86.8      |

Table 7-5. Proportion Of NH Adults, Current Smokers And Recently Quit Smokers, Who Saw A Health Care Provider In The Past 12 Months And Were Advised To Quit Smoking, By Demographic Characteristics, 2003 NH BRFSS

In addition to the use of cigarettes, NH adults were also asked if they had ever used any type of spit tobacco, such as chewing tobacco or snuff. In 2004, 13.2% (95% CI: 12.0-14.5) had used spit tobacco at some time (Table 7-6). Of those who had ever used spit tobacco, 6.4% (95% CI: 3.6-9.2) were still using it every day and 8.8% (95% CI: 5.4-12.3) used it on some days.

Use of spit tobacco varies substantially by gender and age. Table 7-6 represents the proportion of NH adults who have used spit tobacco at some time by demographic characteristics.

- **Gender Differences:** NH males were significantly more likely to have used spit tobacco at some time than females. Almost a quarter of NH males have used spit tobacco, compared to 3% of NH females.
- Age Differences: Younger adults were significantly more likely to have tried spit tobacco than older adults. (Figure 7-4)
- **Educational Differences:** There were no significant differences by level of education in the proportion of adults who, at some time, used spit tobacco.
- **Income Differences:** There were no significant differences by income in the proportion of adults who, at some time, used spit tobacco.

# Figure 7-4. Proportion Of NH Adults Who Have Used Spit Tobacco At Some Time, By Demographic Characteristics, 2004 NH BRFSS



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|                    | Sample Size |         |                         |
|--------------------|-------------|---------|-------------------------|
| Characteristic     | (N)         | Percent | 95% Confidence Interval |
| Total              | 4842        | 13.2    | 12.0-14.5               |
| Sex                |             |         |                         |
| Male               | 1999        | 24.3    | 22.0-26.6               |
| Female             | 2843        | 2.9     | 2.0-3.8                 |
| Age                |             |         |                         |
| 18-24              | 227         | 22.7    | 16.8-28.6               |
| 25-34              | 604         | 20.0    | 16.2-23.7               |
| 35-44              | 1003        | 17.2    | 14.4-20.1               |
| 45-54              | 1140        | 9.2     | 7.2-11.3                |
| 55-64              | 851         | 5.7     | 3.9-7.6                 |
| 65+                | 977         | 5.7     | 4.0-7.3                 |
| Education          |             |         |                         |
| Less than H.S.     | 335         | 12.3    | 7.9-16.7                |
| H.S. or G.E.D.     | 1385        | 15.2    | 12.6-17.8               |
| Some post- H.S.    | 1214        | 12.1    | 9.7-14.6                |
| College graduate   | 1901        | 12.5    | 10.6-14.4               |
| Household income   |             |         |                         |
| Less than \$15,000 | 369         | 8.5     | 4.4-12.7                |
| \$15,000- 24,999   | 595         | 13.2    | 9.4-17.0                |
| \$25,000- 34,999   | 480         | 13.8    | 9.3-18.2                |
| \$35,000- 49,999   | 739         | 16.3    | 12.6-20.0               |
| \$50,000- 74,999   | 877         | 15.1    | 12.3-18.0               |
| \$75,000+          | 1211        | 12.8    | 10.5-15.1               |

 Table 7-6. Proportion Of NH Adults Who Have Used Smokeless Tobacco At

 Some Time, By Demographic Characteristics, 2004 NH BRFSS

Healthy New Hampshire 2010 provided a target for increasing the proportion of NH adults working in smoke-free workplaces. The report notes that indoor air quality impacts health and that "asthma and other respiratory conditions are often triggered by substances in the air, such as tobacco smoke, ozone, or other particles and chemicals". <sup>5</sup>

In 1998, the baseline measurement for this objective was 68% (95% CI: 64–72) of employed adults working in smoke-free workplaces. This was defined as an adult who was employed or self-employed and whose workplace had a written policy that, at a minimum, prohibited smoking anywhere in the building.

The BRFSS questions used to measure this objective have been changed since 1998. In 2003, the most recent year for this topic, these questions were asked of adults employed or self-employed who worked indoors most of the time and whose workplaces had a written policy prohibiting smoking in indoor common or public areas and in work areas.

In 2003, based on the new questions, the BRFSS found that 79% (95% CI: 77–81) of NH adults met this definition of working in a smoke-free workplace. It is, however, difficult to reach a conclusion regarding changes in this indicator because of the changes in question wording.



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HNH2010 Objective: Increase the percentage of employed adults who report a smoke-free workplace.

| Target          | 90% |
|-----------------|-----|
| Baseline (1998) | 68% |

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

For information on tobacco prevention and control contact: NH Tobacco Prevention and Control Program 1-800-852-3345, ext. 6891 (in New Hampshire) 603-271-6891 or go to: www.dhhs.state.nh.us/DHHS/ATOD/TPCP.htm

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#### 8. 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.<sup>11</sup> In 2000, there were an estimated 85,000 deaths attributable to excessive alcohol use. <sup>11</sup> These included deaths from automobile crashes, alcohol-related cancer, stroke, heart disease and liver disease.

Excessive alcohol use is related to violence, child abuse and risky sexual behaviors. Excessive alcohol use is associated with chronic diseases such as stroke; cardiovascular disease and; mental health disorders such as depression, anxiety and suicidal behavior.<sup>12</sup>

Fetal Alcohol Syndrome (FAS) affects between 0.2 to 1.5 per 1,000 births in the U.S.<sup>13</sup> Other alcohol-related birth defects occur approximately three times as often as FAS. These Fetal Alcohol Spectrum Disorders (FASD) are 100% avoidable if women avoid drinking alcohol while pregnant or if they could become pregnant.<sup>12</sup>

The 2004 NH BRFSS asked NH adults a variety of questions regarding their use of alcohol. In 2004, 66.2% (95% CI: 64.7-67.7) of NH adults reported having at least one drink of alcohol in the previous 30 days (Table 8-1). Defining heavy drinking as more than two drinks per day for men and more than one drink per day for women, the 2004 BRFSS found a prevalence of 6.1% (95% CI: 5.2 - 6.9). Binge drinking, defined as having five or more alcoholic beverages on one occasion, was estimated at 16.1% (95% CI: 14.7-17.4) of NH adults having one or more occasions of binge drinking in the previous month.

Table 8-1 and Figure 8-1 examine the prevalence of any alcohol use in the prior month among NH adults, by demographic characteristics. The prevalence of any alcohol use in the previous month by NH adults varies significantly by gender, age, income and education.

- **Gender Differences:** Men were significantly more likely to have had a drink of alcohol in the past month than NH women.
- **Age Differences:** Younger adults were significantly more likely to have had a drink in the past month than older adults.
- Educational Differences: In a reversal of what was seen for many behavioral risk factors, NH adults with more education were significantly more likely to have had a drink of alcohol in the past month than adults with less education.
- **Income Differences:** A pattern similar to education was seen with income. NH adults with higher household incomes were more likely to have had a drink of alcohol in the past month than adults at lower incomes. (Figure 8-1)

## Figure 8-1. Proportion Of NH Adults Having At Least One Drink Of Alcohol In The Past Month, By Income, 2004 NH BRFSS



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| Characteristic   | Sample Size |         |                         |
|------------------|-------------|---------|-------------------------|
| Characteristic   | (N)         | Percent | 95% Confidence Interval |
| Total            | 5036        | 66.2    | 64.7-67.7               |
| Sex              |             |         |                         |
| Male             | 2089        | 71.5    | 69.2-73.8               |
| Female           | 2947        | 61.2    | 59.2-63.2               |
| Age              |             |         |                         |
| 18-24            | 240         | 72.8    | 66.9-78.8               |
| 25-34            | 629         | 72.6    | 68.8-76.3               |
| 35-44            | 1054        | 71.5    | 68.4-74.6               |
| 45-54            | 1184        | 66.2    | 63.1-69.2               |
| 55-64            | 869         | 63.3    | 59.8-66.8               |
| 65+              | 1015        | 50.2    | 46.8-53.6               |
| Education        |             |         |                         |
| Less than high   |             |         |                         |
| school           | 346         | 42.4    | 36.0-48.8               |
| High School or   |             |         |                         |
| G.E.D.           | 1454        | 57.7    | 54.7-60.7               |
| Some post high   |             |         |                         |
| school           | 1264        | 65.9    | 62.8-68.9               |
| College graduate | 1965        | 77.7    | 75.6-79.8               |
| Household income |             |         |                         |
| Less than        |             |         |                         |
| \$15,000         | 392         | 42.5    | 36.2-48.8               |
| \$15,000- 24,999 | 613         | 51.6    | 46.7-56.4               |
| \$25,000- 34,999 | 502         | 59.9    | 54.6-65.2               |
| \$35,000- 49,999 | 755         | 68.2    | 64.3-72.1               |
| \$50,000- 74,999 | 901         | 75.2    | 72.1-78.4               |
| \$75,000+        | 1253        | 78.4    | 75.8-81.0               |

Table 8-1. Proportion Of Respondents Having At Least One Drink Of Alcohol In The Past 30 Days, 2004 NH BRFSS

Table 8-2 represents the prevalence of alcohol use at least once in the past month among NH adults by year between 2001 and 2004. There were no significant changes between 2001 and 2004.

| Table 8-2. Proportion Of Respondents Having At Least One Drink Of Alcohol Ir |
|--|
| The Past 30 Days, 2004 NH BRFSS  |

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | 4018            | 65.3    | 63.6-66.9               |
| 2002 | 5016            | 67.3    | 65.8-68.8               |
| 2003 | 5030            | 66.5    | 65.0-68.0               |
| 2004 | 5036            | 66.2    | 64.7-67.7               |

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

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Table 8-3 presents the percentage, by demographic characteristics, of NH adults who reported alcohol consumption that met the BRFSS definition of heavy drinking. This was defined as more than two drinks per day for men and more than one drink per day for women.

- **Gender Differences:** There was no significant difference by gender in the prevalence of heavy drinking among NH adults.
- Age Differences: Adults aged 18 to 24 were significantly more likely to report heavy drinking than adults aged 65 and older.
- Educational Differences: There were no significant differences by education in the prevalence of heavy drinking.
- **Income Differences:** There were no significant differences by education in the prevalence of heavy drinking.

### Table 8-3. Proportion Of NH Adults Who's Alcohol Use Met The Definition of Heavy Drinking, 2004 NH BRFSS

| Characteristic     | Sample Size (N) | Percent | 95% Confidence Interval |
|--------------------|-----------------|---------|-------------------------|
| Total              | 5020            | 6.1     | 5.2-6.9                 |
| Sex                |                 |         |                         |
| Male               | 2076            | 6.4     | 5.1-7.6                 |
| Female             | 2944            | 5.8     | 4.7-6.9                 |
| Race               |                 |         |                         |
| Age                |                 |         |                         |
| 18-24              | 235             | 11.0    | 6.5-15.4                |
| 25-34              | 628             | 6.3     | 4.2-8.5                 |
| 35-44              | 1052            | 5.4     | 3.8-6.9                 |
| 45-54              | 1182            | 6.2     | 4.8-7.7                 |
| 55-64              | 866             | 5.2     | 3.6-6.7                 |
| 65+                | 1013            | 4.1     | 2.8-5.5                 |
| Education          |                 |         |                         |
| Less than H.S.     | 343             | 5.9     | 3.2-8.6                 |
| H.S. or G.E.D.     | 1446            | 6.7     | 5.0-8.4                 |
| Some post-H.S.     | 1263            | 6.2     | 4.4-8.0                 |
| College graduate   | 1961            | 5.6     | 4.4-6.8                 |
| Household income   |                 |         |                         |
| Less than \$15,000 | 390             | 7.6     | 3.5-11.7                |
| \$15,000- 24,999   | 609             | 4.4     | 2.4-6.5                 |
| \$25,000- 34,999   | 500             | 9.9     | 6.0-13.7                |
| \$35,000- 49,999   | 752             | 6.6     | 4.4-8.9                 |
| \$50,000- 74,999   | 900             | 6.3     | 4.6-8.1                 |
| \$75,000+          | 1252            | 6.3     | 4.7-7.9                 |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

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For this report, binge drinking was defined as having five or more drinks on one or more occasions during the past 30 days. In 2004, 16.1% (95% CI: 14.7-17.4) of NH adults reported binge drinking during the previous month. The prevalence of binge drinking among NH adults was significantly higher among men and younger adults. (Table 8.4 and Figure 8-2)

- Gender Differences: The prevalence of binge drinking among NH men • was significantly higher than among NH women. In 2004, NH males were three times as likely to report a binge drinking episode in the previous month than NH women.
- Age Differences: Younger adults were significantly more likely to binge drink than older adults. More than one-third of NH adults aged 18 to 24 years had one or more binge drinking episodes in the previous 30 days, compared to 3% of NH adults 65 years or older. (Figure 8-2)
- Educational Differences: There were no significant differences by educational level in the prevalence of binge drinking.
- Income Differences: There were no significant differences by income level in the prevalence of binge drinking.

#### Figure 8-2. Prevalence Of Binge Drinking Among NH Adults By Age, 2004 NH BRFSS



100 ■ Percent - Upper Confidence Limit ◇ Lower Confidence Limit

|                       | Sample Size |         | 95% Confidence |
|-----------------------|-------------|---------|----------------|
| Characteristic        | (N)         | Percent | Interval       |
| Total                 | 5022        | 16.1    | 14.7-17.4      |
| Sex                   |             |         |                |
| Male                  | 2080        | 24.6    | 22.3-26.9      |
| Female                | 2942        | 8.1     | 6.7-9.5        |
| Age                   |             |         |                |
| 18-24                 | 239         | 37.4    | 30.7-44.1      |
| 25-34                 | 626         | 21.6    | 17.7-25.4      |
| 35-44                 | 1053        | 17.4    | 14.8-20.0      |
| 45-54                 | 1182        | 12.7    | 10.7-14.8      |
| 55-64                 | 866         | 9.9     | 7.7-12.1       |
| 65+                   | 1012        | 2.8     | 1.7-4.0        |
| Education             |             |         |                |
| Less than high school | 345         | 13.7    | 9.0-18.4       |
| High School or G.E.D. | 1447        | 17.0    | 14.4-19.6      |
| Some post high school | 1261        | 17.8    | 14.9-20.7      |
| College graduate      | 1962        | 14.6    | 12.6-16.6      |
| Household income      |             |         |                |
| Less than \$15,000    | 390         | 13.7    | 8.3-19.1       |
| \$15,000- 24,999      | 612         | 16.8    | 12.4-21.2      |
| \$25,000- 34,999      | 501         | 16.8    | 12.2-21.4      |
| \$35,000- 49,999      | 753         | 13.9    | 10.8-17.1      |
| \$50,000- 74,999      | 901         | 18.4    | 15.2-21.6      |
| \$75,000+             | 1249        | 19.3    | 16.6-22.0      |

Table 8-4. Proportion of NH Adults Binge Drinking on One or More Occasions in the Past 30 Days, 2004 NH BRFSS

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Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

The 2004 BRFSS asked NH adults who reported binge drinking if they had driven a motor vehicle "during or within a couple of hours" of binge drinking. Of those reporting a binge drinking episode, 6.8% (95% CI: 4.6-9.1) drove a motor vehicle soon after.

NH adults who reported binge drinking were more likely to include beer in the beverages they consumed during binge drinking than wine, liquor or cocktails. (Table 8-5)

| Туре                | Sample Size (N) | Percent | 95% Confidence<br>Interval |
|---------------------|-----------------|---------|----------------------------|
| Beer                | 349             | 64.7    | 60.3 - 69.2                |
| Wine                | 65              | 9.6     | 6.7 – 12.5                 |
| Liquor or cocktails | 71              | 14.0    | 10.2 – 17.8                |

Table 8-5. Percentage of NH Adult Binge Drinkers Using Selected Types of Alcoholic Beverages, 2004 NH BRFSS

Percentages will not add up to 100% because respondents could select more than one type of beverage.

NH adults were asked where their most recent occasion of binge drinking took place. Among adults who reported binge drinking, more drank at home (48.7%, 95% CI: 43.8 - 53.5), followed by a location such as a restaurant, banquet hall, bar or club (22.8%, 95% CI: 18.9 - 26.8), 19.7% (95% CI: 15.5 - 23.9) drank in another person's home and 8.8% (95% CI: 6.2 - 11.5) drank in some other place.

Table 8-6 represents the proportion of NH adults reporting binge drinking in the previous 30 days for the years 2001 through 2004. There was no significant change in the prevalence of binge drinking among NH adults for these years.

Table 8-6. Proportion Of NH Adults Binge Drinking In The Past 30 Days, 2004 NH BRFSS

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | 4018            | 15.7    | 14.4-17.1               |
| 2002 | 4980            | 16.6    | 15.3-17.9               |
| 2003 | 5014            | 17.7    | 16.4-19.0               |
| 2004 | 5022            | 16.1    | 14.7-17.4               |

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

#### 9. Weight and Weight Control

Obesity, related to poor diet and physical inactivity, is the second leading actual cause of death in the U.S.<sup>11</sup> In 2000, an estimated 365,000 people died from diseases related to overweight and obesity. <sup>11</sup> CDC recommends controlling weight by remaining physically active and by choosing foods rich in vitamins and nutrients, but lower in calories. These foods include fruits, vegetables, whole grains and fat-free or low fat dairy products.<sup>14</sup> 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. <sup>14</sup>

The BRFSS asks individuals their height and weight and their BMI is calculated from that self-reported information. Individuals are then classified as overweight if their BMI is between 25–29.9 and obese if their BMI exceeds 30.0<sup>.14</sup> Studies have found that BMI collected by telephone surveys such as the BRFSS may underestimate respondent's BMI and the prevalence of obesity and overweight. <sup>1</sup> This should be kept in mind when interpreting findings from the NH BRFSS.

In 2004, more than half of NH adults reported a BMI classified as overweight or obese (Figure 9-1 and Table 9-1).

### Figure 9-1 Prevalence Of Weight Classifications Based On Body Mass Index, 2004 NH BRFSS



# Table 9-1. Prevalence Of Weight Classifications Based On Body Mass Index,2004 NH BRFSS

|                         | Sample Size | Percent | 95% Confidence |
|-------------------------|-------------|---------|----------------|
| BMI Category            | (N)         |         | Interval       |
| Not Overweight or Obese | 2007        | 42.3    | 40.6 - 44.0    |
| Overweight              | 1755        | 36.1    | 34.5 – 37.7    |
| Obese                   | 1061        | 21.6    | 20.2 - 23.0    |

Percentages add to 100%. Each estimate represents the percentage of respondents answering questions about their height and weight.

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FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services

Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section The prevalence of overweight and obesity varied among NH adults by gender, age and by education. (Table 9-2)

- **Gender Differences:** The prevalence of overweight and obesity was significantly higher among men than among women. (Figure 9-2)
- Age Differences: Older adults were significantly more likely to be obese or overweight than younger adults. The prevalence of overweight or obesity increased significantly from 37.5% among 18 to 24 year old adults to 59.8% among adults aged 65 or older.
- Educational Differences: There were no significant differences in the prevalence of combined obesity and overweight by education.
- **Income Differences:** Adults with incomes of \$15,000 to \$24,999 were significantly more likely to be obese or overweight than adults with incomes of \$50,000 to \$74,999.

## Figure 9-2. Prevalence Of Overweight Or Obesity Among NH Adults, By Gender, 2004 NH BRFSS



|                    | Sample   |         | 95% Confidence |
|--------------------|----------|---------|----------------|
| Characteristic     | Size (N) | Percent | Interval       |
| Total              | 4823     | 57.7    | 56.1-59.3      |
| Sex                |          |         |                |
| Male               | 2084     | 68.4    | 65.9-70.8      |
| Female             | 2739     | 46.9    | 44.9-49.0      |
| Age                |          |         |                |
| 18-24              | 229      | 37.5    | 30.9-44.0      |
| 25-34              | 605      | 54.3    | 50.0-58.6      |
| 35-44              | 1006     | 59.7    | 56.4-63.0      |
| 45-54              | 1142     | 62.7    | 59.6-65.8      |
| 55-64              | 832      | 66.8    | 63.3-70.2      |
| 65+                | 980      | 59.8    | 56.4-63.1      |
| Education          |          |         |                |
| Less than H.S.     | 335      | 55.1    | 48.7-61.6      |
| H.S. or G.E.D.     | 1393     | 60.3    | 57.2-63.3      |
| Some post-H.S.     | 1189     | 60.2    | 56.9-63.5      |
| College graduate   | 1901     | 54.6    | 52.0-57.1      |
| Household income   |          |         |                |
| Less than \$15,000 | 372      | 56.9    | 50.6-63.1      |
| \$15,000- 24,999   | 594      | 51.4    | 46.6-56.3      |
| \$25,000- 34,999   | 483      | 59.0    | 53.6-64.4      |
| \$35,000- 49,999   | 737      | 60.3    | 56.2-64.4      |
| \$50,000- 74,999   | 864      | 63.0    | 59.4-66.7      |
| \$75,000+          | 1223     | 58.3    | 55.1-61.4      |

Table 9-2. Prevalence Of Overweight Or Obesity Among NH Adults, By Demographic Characteristics, 2004 NH BRFSS

Table 9-3 represents the proportion of NH adults reporting a BMI classified as obese or overweight for the years 2001 through 2004. There were no significant differences in the proportion of overweight or obese adults for these years.

Table 9-3. Proportion Of NH Adults Overweight Or Obese, By Year, 2001- 2004 NH BRFSS

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | 3830            | 56.0    | 54.2 - 57.8             |
| 2002 | 4765            | 56.3    | 54.7 – 57.9             |
| 2003 | 4760            | 56.9    | 55.3 – 58.6             |
| 2004 | 4823            | 57.7    | 56.1 – 59.3             |

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

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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". <sup>5</sup>

In 2004, the BRFSS found that 58% (95% CI: 56 - 59) of NH adults reported a height and weight classified as overweight or obese.



# HNH2010 Objective: Reduce the prevalence of overweight and obesity.

| Target          | 40 percent |
|-----------------|------------|
| Baseline (1999) | 50 percent |
|                 |            |

To Calculate BMI

BMI = Formula: weight (lb) / [height (in)]<sup>2</sup> x 703

Normal weight BMI: less than 25.0 Overweight BMI: 25.0–29.9 Obese BMI: 30.0 and higher

For more information, visit the BMI Calculator at the Centers for Disease Control and Prevention:

http://www.cdc.gov/nccdphp/dnpa/bmi/index.htm

or at the

National Heart, Lung, and Blood Institutes:

www.nhlbisupport.com/bmi/bmicalc.htm

Moderate, regular physical activity can reduce the risk of developing heart disease, stroke, type 2 diabetes, high blood pressure and colon cancer.<sup>15</sup> 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. Adults should consult with their health care provider before starting a vigorous exercise program if they have ever had heart trouble or high blood pressure or suffer from chest pains, dizziness or fainting, arthritis or if they are over age 40 (men) or 50 (women).<sup>16</sup>

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity makes the following recommendations for adults considering becoming more physically active<sup>16</sup>:

- 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.

Each year, the BRFSS asked adults if, in the past month, they had participated in any physical activities or exercises other than their regular job. Examples included running, calisthenics, golf, gardening or walking for exercise.

Figure 10-1 and Table 10-1 represent the proportion of NH adults reporting they had not participated in any physical activity outside of their job in the previous month, by demographic characteristics.

- **Gender Differences:** The proportion of NH men with no leisure time physical activity was not significantly different from that of NH women.
- Age Differences: Older adults were significantly more likely to have no leisure time physical activity in the previous month than younger adults. The proportion of adults aged 65 and older with no leisure time physical activity in the past month was three times that of 18 to 24 year old adults.
- Educational Differences: Generally, adults with less education were more likely to be inactive. Adults with a high school diploma or less were significantly more likely to be inactive than adults with some college education or a college degree. (Figure 10-1)
- **Income Differences:** Adults with lower incomes were significantly more likely to be inactive during their leisure time than adults at higher incomes.



#### Figure 10-1. No Leisure Time Physical Activity By Education, 2004, NH BRFSS

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|                    | Sample   |         | 95% Confidence |
|--------------------|----------|---------|----------------|
| Characteristic     | Size (N) | Percent | Interval       |
| Total              | 5057     | 18.5    | 17.3-19.7      |
| Sex                |          |         |                |
| Male               | 2101     | 16.8    | 15.0-18.6      |
| Female             | 2956     | 20.1    | 18.5-21.8      |
| Age                |          |         |                |
| 18-24              | 242      | 10.4    | 6.4-14.5       |
| 25-34              | 631      | 13.0    | 10.1-15.9      |
| 35-44              | 1058     | 15.9    | 13.5-18.4      |
| 45-54              | 1190     | 18.0    | 15.5-20.5      |
| 55-64              | 872      | 22.3    | 19.2-25.3      |
| 65+                | 1016     | 31.7    | 28.5-34.9      |
| Education          |          |         |                |
| Less than H.S.     | 351      | 33.0    | 27.3-38.8      |
| H.S. or G.E.D.     | 1464     | 25.2    | 22.7-27.7      |
| Some post-H.S.     | 1263     | 18.2    | 15.8-20.6      |
| College graduate   | 1972     | 10.6    | 9.1-12.1       |
| Household income   |          |         |                |
| Less than \$15,000 | 392      | 34.5    | 28.9-40.2      |
| \$15,000- 24,999   | 615      | 27.4    | 23.3-31.6      |
| \$25,000- 34,999   | 502      | 20.7    | 16.6-24.8      |
| \$35,000- 49,999   | 760      | 18.8    | 15.7-21.9      |
| \$50,000- 74,999   | 903      | 14.7    | 12.1-17.2      |
| \$75,000+          | 1258     | 9.9     | 8.0-11.7       |

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Table 10-1. Proportion Of NH Adults With No Leisure Time Physical Activity In The Previous Month, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Table 10.2 represents the proportion of NH adults reporting they did not engage in any leisure time physical activity in the previous 30 days, by year. There were no significant changes between 2001 and 2004.

| Table 10-2. Proportion Of NH Adults With No Leisure Time Physical A | Activity In The |
|---|-----------------|
| Previous 30 Days, 2001 – 2004 NH BRFSS                              | -               |

| Year | Sample   | Percent | 95% Confidence |
|------|----------|---------|----------------|
|      | Size (N) |         | Interval       |
| 2001 | 4067     | 19.5    | 18.2 – 20.9    |
| 2002 | 5038     | 19.9    | 18.7 – 21.2    |
| 2003 | 5040     | 19.9    | 18.6 – 21.2    |
| 2004 | 5057     | 18.5    | 17.3 – 19.7    |

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

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Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section

In 2003, adults were also asked a more detailed series of questions about their general level of leisure time physical activity. Based on their responses to these questions, two 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 10-2 and Table 10-3 represent the percentage of NH adults reporting various levels of physical activity in 2003, the most recent year when physical activity questions were asked.

#### Figure 10-2. Percent Of NH Adults Not Participating In Varying Levels Of Physical Activity, 2003 NH BRFSS



 Table 10-3. Proportion Of NH Adults Who Participated In Various Levels Of

 Physical Activity, 2003 NH BRFSS

| Physical Activity Level                                     | Sample<br>Size (N) | Percent | 95% Confidence<br>Interval |
|---|--------------------|---------|----------------------------|
| Meet recommendation for vigorous<br>activity                | 543                | 12.1    | 11.1-13.2                  |
| Meet recommendation for moderate activity                   | 1097               | 22.9    | 21.6-24.3                  |
| Meet recommendation for both moderate and vigorous activity | 882                | 19.6    | 18.3-20.8                  |
| Insufficient activity to meet recommendation for either     | 1670               | 34.9    | 33.4-36.3                  |
| No physical activity  | 518                | 10.5    | 9.6-11.4                   |

Percentages add up to 100%. Estimate represents the percentage of respondents answering the questions regarding physical activity.

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Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section Healthy New Hampshire 2010 established an objective based on BRFSS data for increasing physical activity among NH adults. The target was an increase to 50% of NH adults who engaged in physical activity for 30 minutes or more, five or more times a week by the year 2010.

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.

The new national indicators defined physical activity as "moderate" or "vigorous". A new target was set for the national HP2010 Objective 22.2. The new national target was 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 2003, 54.6% (95% CI: 53.0-56.2) of NH adults reported activity meeting this definition.



# HNH2010 Objective: Increase the percentage of persons who engage in physical activity for 30 minutes or more five or more times a week.

| Target      | 50 percent             |
|-------------|------------------------|
| NH Baseline | 24% for adults in 1998 |

### 11. Fruit and Vegetable Consumption

A diet rich in fruits and vegetables can lower the risk of certain cancers and other chronic diseases and contribute to a healthy weight and good cardiovascular health.<sup>17</sup> The United States Department of Health and Human Services and the United States Department of Agriculture's *Dietary Guidelines for Americans* recommends a diet that includes five to nine servings of fruits and vegetables.

The 2003 BRFSS asked NH adults six questions regarding their fruit and vegetable consumption. In 2003, 28.5% (95% CI: 27.1 - 29.9) of New Hampshire adults reported eating fruits and vegetables five or more times per day. (Table 11-1) Table 11-1 and Figure 11-1 represent the frequency of fruit and vegetable intake by NH adults in 2003. Most NH adults fell short of the Dietary Guideline's fruit and vegetable recommendations.





Table 11-1. Daily Fruit And Vegetable Consumption By NH Adults, 2003 NH BRFSS

| Servings per day      | Sample Size (N) | Percent | 95% Confidence Interval |
|-----------------------|-----------------|---------|-------------------------|
| Less than once a day  | 168             | 4.0     | 3.3-4.7                 |
| 1 – 2 times a day     | 1462            | 30.6    | 29.1-32.1               |
| 3 – 4 times a day     | 1901            | 36.9    | 35.3 -38.4              |
| 5 or more times a day | 1509            | 28.5    | 27.1-29.9               |

Percentages add to 100%. Each estimate represents the percentage of respondents answering all of the questions about fruit and vegetable consumption.

The proportion of NH adults who ate fruits and vegetables five or more times a day in 2003 varied by gender, age, and education level. (Table 11-2 and Figure 11-2)

- **Gender Differences:** Women were significantly more likely than men to eat fruits and vegetables five or more times a day.
- Age Differences: Adults aged 18 to 24 years were significantly less likely to eat fruits and vegetables five or more times a day than adults aged 65 years or older.
- Educational Differences: Adults with higher levels of education were significantly more likely to eat fruits and vegetables five or more times a day than adults with less education. (Figure 11-2)
- **Income Differences:** There was no difference by income in the proportion of adults eating fruits and vegetables five or more times a day.

## Figure 11-2. Percentage Of NH Adults Who Ate Fruits And Vegetables Five Or More Times A Day, By Education, 2003 NH BRFSS



| Characteristic     | Sample Size (N) | Percent | 95% Confidence Interval |
|--------------------|-----------------|---------|-------------------------|
| Total              | 5042            | 28.5    | 27.1-29.9               |
| Sex                |                 |         |                         |
| Male               | 2059            | 22.6    | 20.5-24.7               |
| Female             | 2983            | 34.1    | 32.2-36.1               |
| Age                |                 |         |                         |
| 18-24              | 246             | 26.1    | 20.2-31.9               |
| 25-34              | 703             | 25.3    | 21.8-28.8               |
| 35-44              | 1101            | 26.8    | 24.0-29.6               |
| 45-54              | 1171            | 25.3    | 22.6-28.0               |
| 55-64              | 824             | 31.9    | 28.5-35.4               |
| 65+                | 923             | 36.3    | 32.9-39.7               |
| Education          |                 |         |                         |
| Less than H.S.     | 333             | 18.3    | 13.4-23.3               |
| H.S. or G.E.D.     | 1424            | 22.3    | 19.7-24.8               |
| Some post-H.S.     | 1317            | 29.6    | 26.8-32.5               |
| College graduate   | 1956            | 34.6    | 32.3-37.0               |
| Household income   |                 |         |                         |
| Less than \$15,000 | 366             | 28.3    | 22.9-33.7               |
| \$15,000- 24,999   | 583             | 26.8    | 22.5-31.0               |
| \$25,000- 34,999   | 540             | 28.2    | 23.8-32.6               |
| \$35,000- 49,999   | 853             | 25.0    | 21.7-28.3               |
| \$50,000- 74,999   | 909             | 29.1    | 25.9-32.4               |
| \$75,000+          | 1180            | 29.3    | 26.4-32.1               |

Table 11-2. Percentage Of NH Adults Who Ate Fruits And Vegetables Five Or More Times A Day, By Demographic Characteristics, 2003 NH BRFSS

Table 11-3 represents the proportion of NH adults reporting that they ate five or more servings of fruits or vegetables a day in 2002 and 2003. These questions were not asked in 2001 or in 2004.

| Table 11 | -3. Pi | opor | tion ( | Of NH  | I Adult | ts Who | Ate | Fruits | And | Vege | tables | Five | Or |
|----------|--------|------|--------|--------|---------|--------|-----|--------|-----|------|--------|------|----|
| More Tir | nes A  | Ďay  | , 200  | 2, 200 | )3, NH  | BRFS   | S   |        |     | -    |        |      |    |
|          |        |      |        |        |         |        |     |        |     |      |        |      |    |

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | NA              | NA      | NA                      |
| 2002 | 1509            | 28.5    | 27.1 – 29.9             |
| 2003 | 1493            | 28.5    | 27.1 – 29.9             |
| 2004 | NA              | NA      | NA                      |

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

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#### The "5-A-Day for Better Health" Program

The National Cancer Institute and the Produce for Better Health Foundation (a not-for-profit consumer education organization founded by the produce industry) are two leading members of the National 5-A-Day Partnership.<sup>18</sup> The objective of the 5-A-Day Program is to increase fruit and vegetable consumption so that all Americans are consuming the amount recommended in the Dietary Guidelines for Americans.<sup>18</sup> In 2002, NH adults were asked if they had heard of the 5-A-Day Program and if they knew the program focus.

In 2002, 18.6% (95% CI: 17.3 – 19.8) of NH adults had heard of the 5-A-Day program. Of these, 60.8% (95% CI: 57.1 – 64.4) correctly identified the focus of the 5-A-Day Program as "fruits and vegetables." (Table 11-4)

| Table 11-4. | Emphasis Of        | f The 5-A-Day | Program, | Among NH | Adults Whe | o Had Heard |
|-------------|--------------------|---------------|----------|----------|------------|-------------|
| Of The 5 A  | <b>Day Program</b> | , 2002 NH BRI | FSS      |          |            |             |

| Response              | Sample Size | Percent | 95% Confidence Interval |
|-----------------------|-------------|---------|-------------------------|
| The 5 food groups     | 140         | 14.6    | 12.1-17.1               |
| Fruits and vegetables | 567         | 60.8    | 57.1-64.4               |
| Weight control        | 7           | 0.5     | 0.1-0.9                 |
| Other                 | 39          | 4.6     | 3.0-6.2                 |
| Don't know/Not sure   | 161         | 19.5    | 16.4-22.6               |

Percentages add to 100%. This table includes all respondents who reported seeing or hearing about the 5-A-Day program.

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.<sup>5</sup> The 2003 BRFSS found that 28.5% (95% CI: 27.1-29.9) of NH adults reported eating five or more servings of fruits and vegetables a day.



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

| Target   | 50 percent             |
|----------|------------------------|
| Baseline | 28% for adults in 1998 |



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#### 12. Folic Acid and Vitamin Use

Folic acid reduces the risk of neural tube defect (NTD), an incomplete closing of the spine and skull.<sup>19</sup> NTDs include spina bifida, a condition that can cause paralysis, and anencephaly (no brain formation). The annual medical care and surgical costs for persons with spina bifida in the United States exceed \$200 million.<sup>19</sup> NTDs can be prevented if women have adequate folic acid before becoming pregnant and throughout pregnancy.<sup>19</sup> Because folic acid is so important in the first part of the pregnancy, CDC recommends that all women of child bearing age, whether they plan on becoming pregnant or not, take a daily multi-vitamin containing 400 micrograms of folic acid.<sup>19</sup>

In 2004, among NH women of childbearing age (ages 18 to 45), 49.9% (46.6 – 53.3) reported taking a vitamin or supplement containing folic at least once a day. Overall in 2004, 62.7% of adults took some type of vitamin or supplement (95% CI: 61.1 - 64.4) and 57.4% (57.4 - 59.1) took a multivitamin or a vitamin containing folic acid at least once a day.

Respondents were also asked about their knowledge of folic acid. In 2004, 70.1% (68.5 - 71.7) of adults had heard or read something about folic acid. Of those who had heard or read about folic acid, 63.6% knew it was recommended to prevent birth defects (95% CI: 61.4 - 65.8) and, of these, 88.8% (86.9 - 90.7) knew it should be started before a woman becomes pregnant (Table 12-1) Significantly more women (70.9%, 95% CI: 68.6 - 73.3) than men (50.5%, 95% CI: 46.4 - 54.7) knew the reason for folic acid use.

| Table 12-1. Knowledge Of Reason For Folic Acid, Among NH Adults Who Had |
|---|
| Heard Or Read About Folic Acid, 2004 NH BRFSS                           |

| Perceived reason for taking | Sample Size | Percent | 95% Confidence |
|-----------------------------|-------------|---------|----------------|
| folic acid                  | (N)         |         | Interval       |
| Make strong bones           | 376         | 13.9    | 12.4 – 15.4    |
| Prevent birth defects       | 1586        | 63.6    | 61.4 – 65.8    |
| Prevent high blood pressure | 106         | 4.5     | 3.5 – 5.6      |
| Other                       | 462         | 18.0    | 16.2 – 19.8    |

Percentages in this table add to 100%. Each estimate represents the percentage of respondents answering the question regarding knowledge of folic acid use.

Table 12-2 represents the proportion of NH women aged 18 to 45 years who reported taking a vitamin or supplement containing folic acid at least once a day in 2003 and 2004. There was no significant change in the proportion of women of childbearing age taking folic acid between 2003 and 2004. These questions were not asked in 2001 or 2002.

# Table 12-2. Proportion Of NH Women Aged 18 To 45 Years Who Took A FolicAcid Vitamin or Supplement At Least Once A Day, 2003, 2004 NH BRFSS

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | NA              | NA      | NA                      |
| 2002 | NA              | NA      | NA                      |
| 2003 | 1225            | 48.8    | 45.5-52.1               |
| 2004 | 1145            | 49.9    | 46.6-53.3               |

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


### 13. Injury Prevention

Unintentional injury was the fifth leading cause of death and the third leading cause of potential life lost in NH between 1999 and 2001.<sup>20</sup> During this period in NH, unintentional injuries were the most frequent cause of death for residents aged one to 34 years.<sup>20</sup>

### Falls

Nationally, falls were the leading mechanism of non-fatal injury in the U.S. in 2004.<sup>21</sup> In NH, falls were the most frequent reason for both inpatient hospitalizations and emergency department visits.<sup>22</sup>

The 2003 NH BRFSS asked NH adults aged 45 years and older about falls they experienced in the previous three months. In 2003, 15.0% (95% CI: 13.6-16.4) of NH adults aged 45 years and older had experienced a fall in the past three months. The prevalence of falls among NH adults aged 45 or older did not vary significantly by demographic characteristics (Table 13-1)

- **Gender Differences:** There were no significant differences in the prevalence of falls among NH adults aged 45 and older by gender.
- Age Differences: There were no significant differences in the prevalence of falls among NH adults aged 45 and older by age.
- **Educational Differences:** There were no significant differences in the prevalence of falls among NH adults aged 45 and older by level of education.
- **Income Differences:** There were no significant differences in the prevalence of falls among NH adults aged 45 and older by income.

|                       | Sample Size |         | 95% Confidence |
|-----------------------|-------------|---------|----------------|
| Characteristic        | (N)         | Percent | Interval       |
| Total                 | 2890        | 15.0    | 13.6-16.4      |
| Sex                   |             |         |                |
| Male                  | 1188        | 14.7    | 12.5-16.9      |
| Female                | 1702        | 15.3    | 13.4-17.2      |
| Age                   |             |         |                |
| 45-54                 | 1162        | 13.6    | 11.4-15.8      |
| 55-64                 | 817         | 14.8    | 12.2-17.4      |
| 65+                   | 911         | 16.9    | 14.2-19.6      |
| Education             |             |         |                |
| Less than high school | 233         | 15.3    | 10.2-20.4      |
| High School or G.E.D. | 837         | 15.7    | 13.0-18.4      |
| Some post high school | 697         | 13.9    | 11.0-16.7      |
| College graduate      | 1118        | 15.1    | 12.8-17.4      |
| Household Income      |             |         |                |
| Less than \$15,000    | 260         | 16.0    | 11.1-21.0      |
| \$15,000- 24,999      | 384         | 16.6    | 12.6-20.6      |
| \$25,000- 34,999      | 305         | 13.9    | 9.82-17.9      |
| \$35,000- 49,999      | 456         | 13.7    | 10.3-17.0      |
| \$50,000- 74,999      | 473         | 14.3    | 10.7-17.9      |
| \$75,000+             | 630         | 14.2    | 11.1-17.2      |

Table 13-1. Proportion Of NH Adults Experiencing A Fall In The Past Three Months, By Demographic Characteristics, 2003 NH BRFSS

Among NH adults aged 45 and older who had experienced a fall in the previous three months, 31.4% (95% CI: 26.8-36.1) reported they were injured to the degree that they had to limit their usual activities and, or, see a doctor. Table 13-2 represents the proportion of NH adults, aged 45 and older, falling in 2003 and injuring themselves in the fall, by demographic characteristics. There was no significant variation by demographic characteristics.

- Gender Differences: There were no significant differences in the prevalence of injury due to falls among NH adults aged 45 and older by gender.
- Age Differences: There were no significant differences in the prevalence of injury due to falls among NH adults aged 45 and older by age.
- Educational Differences: There were no significant differences in the prevalence of injury due to falls among NH adults aged 45 and older by level of education.
- **Income Differences:** There were no significant differences in the prevalence of injury due to falls among NH adults aged 45 and older by income.

|                    | Sample   |         | 95% Confidence |  |
|--------------------|----------|---------|----------------|--|
| Characteristic     | Size (N) | Percent | Interval       |  |
| Total              | 437      | 31.4    | 26.8-36.1      |  |
| Sex                |          |         |                |  |
| Male               | 180      | 25.8    | 19.2-32.4      |  |
| Female             | 257      | 36.3    | 29.9-42.7      |  |
| Age                |          |         |                |  |
| 45-54              | 164      | 35.8    | 27.8-43.8      |  |
| 55-64              | 128      | 25.4    | 17.4-33.4      |  |
| 65+                | 145      | 31.5    | 23.6-39.5      |  |
| Education          |          |         |                |  |
| Less Than H.S.     | 35       | 30.5    | 14.7-46.3      |  |
| H.S. Or G.E.D.     | 130      | 34.5    | 25.8-43.2      |  |
| Some Post-H.S.     | 98       | 34.9    | 24.6-45.2      |  |
| College Graduate   | 172      | 26.9    | 19.9-34.0      |  |
| Household Income   |          |         |                |  |
| Less Than \$15,000 | 41       | 39.9    | 24.2-55.6      |  |
| \$15,000- 24,999   | 64       | 41.2    | 28.1-54.3      |  |
| \$25,000- 34,999   | 48       | 41.2    | 25.9-56.5      |  |
| \$35,000- 49,999   | 66       | 23.2    | 13.4-33.0      |  |
| \$50,000- 74,999   | 67       | 27.7    | 16.4-38.9      |  |
| \$75,000+          | 84       | 27.1    | 17.2-37.0      |  |

### Table 13-2. Proportion Of NH Adults Injured In A Fall In The Past 3 Months, Among Those Reporting A Fall, By Demographic Characteristics, 2003 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

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#### FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004

NH Department of Health and Human Services Division of Public Health Services

### Seat Belt Use

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In the U.S., motor vehicle accidents were the fourth leading cause of non-fatal injury in 2004.<sup>21</sup> The National Highway Safety Administration estimates that use of three-point seat belts can reduce the risk of death from an accident to front-seat occupants of passenger cars by 45 percent and of light trucks by up to 60 percent.<sup>23</sup>

In 2002, the NH BRFSS asked adults how often they wore seat belts while riding in a motor vehicle. In 2002, 63.7% (95% CI: 62.1-65.2) of adults always wore seatbelts when driving while 10.3% (95% CI: 9.3-11.3) never wore seat belts. (Table 13-3)

Table 13-3. Frequency Of Seat Belt Use By NH Adults, 2002 NH BRFSS

| Frequency of wearing seat belts | Sample Size (N) I | Percent 95% Confidence Interval |
|---------------------------------|-------------------|---------------------------------|
| Always                          | 3264              | 63.7 (62.1-65.2)                |
| Nearly always                   | 543               | 11.1 (10.1-12.1)                |
| Sometimes                       | 463               | 9.3 ( 8.4-10.3)                 |
| Seldom                          | 263               | 5.5 ( 4.8- 6.3)                 |
| Never                           | 492               | 10.3 ( 9.3-11.3)                |
| Never ride in car               | 9                 | 0.1 ( 0.1- 0.2)                 |

Percentages in this table add up to 100%. Each estimate represents the percentage of respondents answering the question regarding frequency of seat belt use.

The prevalence of seat belt use among NH adults in 2002 varied by demographic characteristics. (Table 13.4 and Figure 13.1)

- **Gender Differences:** NH females were significantly more likely to always wear seat belts than males.
- Age Differences: NH adults aged 25 to 44 years were significantly more likely to always wear seat belts than adults aged 18 to 24.
- Educational Differences: Adults with higher levels of education were significantly more likely to always wear seat belts than adults with less education. (Figure 13-1)
- **Income Differences:** Adults with higher incomes were significantly more likely to always wear seat belts than adults with less education.

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# Figure 13-1. Proportion Of NH Adults Always Wearing Seat Belts When Driving, By Education, 2002 NH BRFSS



| Tab  | le 13-4. | Proportion  | Of NH Ad    | ults Alway | s Wearing | Seat Belts | s When | Driving, |
|------|----------|-------------|-------------|------------|-----------|------------|--------|----------|
| By I | Demogr   | aphic Chara | acteristics | 5, 2002 NH | BRFSS     |            |        |          |

|                       |                 |         | 95% Confidence |
|-----------------------|-----------------|---------|----------------|
| Characteristic        | Sample Size (N) | Percent | Interval       |
| Total                 | 5034            | 63.7    | 62.1-65.2)     |
| Sex                   |                 |         |                |
| Male                  | 2112            | 56.5    | 54.1-58.9      |
| Female                | 2922            | 70.4    | 68.5-72.3      |
| Age                   |                 |         |                |
| 18-24                 | 304             | 54.7    | 48.3-61.0      |
| 25-34                 | 753             | 68.0    | 64.1-71.6      |
| 35-44                 | 1206            | 64.9    | 61.9-67.8      |
| 45-54                 | 1064            | 64.5    | 61.1-67.6      |
| 55-64                 | 742             | 62.3    | 58.3-66.2      |
| 65+                   | 891             | 63.5    | 59.9-66.9      |
| Education             |                 |         |                |
| Less than high school | 338             | 43.2    | 37.0-49.6      |
| High School or G.E.D. | 1480            | 53.1    | 50.2-56.1      |
| Some post high school | 1328            | 63.2    | 60.2-66.2      |
| College graduate      | 1877            | 77.5    | 75.3-79.6      |
| Household income      |                 |         |                |
| Less than \$15,000    | 332             | 56.6    | 50.1-62.8      |
| \$15,000- 24,999      | 600             | 52.5    | 47.6-57.3      |
| \$25,000- 34,999      | 585             | 55.1    | 50.5-59.6      |
| \$35,000- 49,999      | 831             | 59.7    | 55.8-63.4      |
| \$50,000- 74,999      | 876             | 66.7    | 63.0-70.2      |
| \$75,000+             | 1114            | 74.7    | 71.7-77.5      |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

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#### FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services

Division of Public Health Services

#### **Firearms**

Firearms are a frequent cause of death due to unintentional injury and are the most common mechanism for suicide for both adults and adolescents.<sup>20,21,22</sup> In 2004, questions were added to the BRFSS to estimate the prevalence of adults having loaded, unlocked firearms in their homes.

In 2004, 31.0% (95% CI: 29.4-32.5) of NH adults reported they had firearms in their homes and 2.1% (95% CI: 1.6 - 2.5) reported they had a firearm that was loaded but did not have a lock on it.

There was some variation, by demographic characteristics, in the prevalence of NH adults living with loaded, unlocked firearms in their homes. (Figure 13-2 and Table 13-5)

- **Gender Differences:** NH men were significantly more likely to have a loaded, unlocked firearm in their home than women.
- Age Differences: Adults aged 18 to 24 were significantly less likely than adults aged 45 to 64 to have a loaded, unlocked firearm in their home. There were no other significant differences by age.(Figure 13-2)
- Educational Differences: There were no significant differences by education level in the proportion of NH adults with loaded, unlocked firearms in their homes.
- **Income Differences:** There were no significant differences by income in the proportion of NH adults with loaded, unlocked firearms in their homes.

# Figure 13-2. Proportion Of NH Adults Living In A Home With A Loaded, Unlocked Firearm, By Age, 2004 NH BRFSS.



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FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services

|                       | Sample Size |         | 95% Confidence |
|-----------------------|-------------|---------|----------------|
| Characteristic        | (N)         | Percent | Interval       |
| Total                 | 4715        | 2.1     | 1.6-2.5        |
| Sex                   |             |         |                |
| Male                  | 1929        | 3.2     | 2.4-4.1        |
| Female                | 2786        | 1.0     | 0.6-1.4        |
| Age                   |             |         |                |
| 18-24                 | 224         | 0.5     | 0.0-1.5        |
| 25-34                 | 590         | 1.1     | 0.2-2.0        |
| 35-44                 | 980         | 2.2     | 1.1-3.3        |
| 45-54                 | 1117        | 3.0     | 1.9-4.1        |
| 55-64                 | 820         | 3.6     | 2.3-4.9        |
| 65+                   | 949         | 1.5     | 0.7-2.4        |
| Education             |             |         |                |
| Less than high school | 329         | 1.9     | 0.1-3.8        |
| High School or G.E.D. | 1343        | 2.3     | 1.5-3.1        |
| Some post high school | 1186        | 1.8     | 0.9-2.6        |
| College graduate      | 1852        | 2.1     | 1.3-2.8        |
| Household income      |             |         |                |
| Less than \$15,000    | 367         | 1.5     | 0.2-2.8        |
| \$15,000- 24,999      | 585         | 1.3     | 0.6-2.1        |
| \$25,000- 34,999      | 470         | 2.8     | 1.1-4.6        |
| \$35,000- 49,999      | 717         | 2.4     | 1.0-3.8        |
| \$50,000- 74,999      | 857         | 1.8     | 0.9-2.7        |
| \$75,000+             | 1190        | 2.8     | 1.8-3.7        |

| Table 13-5. | Proportion Of NH Adults Living In A Home With | A Loaded, |
|-------------|---|-----------|
| Unlocked F  | rearm, By Demographic Characteristics, 2004 N | HBRFSS.   |

#### Interpersonal Violence

Among younger age groups in the U.S., homicide is a leading cause of death.<sup>24</sup> In 2001, 80 NH residents required hospitalization and 2,824 were seen in an Emergency Department as a result of assault injuries.<sup>22</sup>

In 2002, NH adults were asked a series of questions regarding interpersonal violence. In 2002, the BRFSS found that 2.9% (95% CI: 2.3 - 3.5) of NH adults had been subject to some type of physical violence in the past twelve months and, among these, 23.8% (95% CI: 13.8 - 33.8) required medical attention for an injury they sustained as a result. Adults who had been subjected to violence were asked, on each occasion over the previous 12 months, who the source of the violence was. A friend or someone else known to the person was the most common response, (39.3%, 95% CI: 27.7 - 51.0). (Table 13-6)

| · · · · · · · · · · · · · · · · · · ·    |          | · · · · · |                |
|--|----------|-----------|----------------|
| Person Who Was Source of Physical        | Sample   |           | 95% Confidence |
| Violence                                 | Size (N) | Percent   | Interval       |
| Spouse or domestic partner               | 34       | 30.9      | 20.1-41.6      |
| Ex-spouse or ex-partner                  | 21       | 17.5      | 8.7-26.2       |
| Boyfriend, girlfriend, or date           | 20       | 21.7      | 11.6-31.7      |
| Ex-boyfriend, or ex-girlfriend           | 17       | 15.2      | 6.7-23.7       |
| Parent, brother, sister, or other family |          |           |                |
| member                                   | 14       | 20.0      | 9.7-30.4       |
| A friend or someone you know             | 39       | 39.3      | 27.7-51.0      |
| A total stranger                         | 22       | 26.3      | 15.4-37.3      |
| Someone else                             | 19       | 16.1      | 8.4-23.8       |

Table 13-6. Proportion of NH Adults Who Experienced Violence Identifying Various Types of People As the Source of the Violence, 2002 NH BRFSS

Percentages will not add up to 100%. Respondents were asked to describe the source of violence for each occasion in the previous twelve months. There may have been more than one occasion.

#### Suicide

Between 1999 and 2001, suicide was the ninth leading cause of death among NH residents overall and, for New Hampshire young people aged 15-24 years, suicide was the second leading cause of death, behind unintentional injury.<sup>20</sup> In 2001, 170 NH residents died as a result of self-inflicted injuries,<sup>20</sup> 733 were hospitalized and 1,505 were seen in a hospital emergency department.<sup>22</sup>

In 2001, the BRFSS asked NH adults about suicidal thoughts and attempts. Among all NH adults in 2001: 2.1% (95% CI: 1.6 - 2.6) said they had at some time considered suicide; 1.0% (95% CI: 0.6 - 1.4) had made a serious plan; 0.5% (95% CI: 0.2 - 0.8) had made an attempt and; 0.2% (95% CI: 0.04 - 0.4) required medical treatment from a suicide attempt.

# Figure 13-3. Prevalence Of Suicidal Thoughts And Actions Among NH Adults, 2001 NH BRFSS



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### 14. Osteoporosis Awareness

Osteoporosis is a disease in which the bones become weak and are more likely to break. People with osteoporosis most often break bones in the hip, spine, and wrist. Osteoporosis can strike at any age and strike both men and women, but is most common in older women. Eighty percent of the people in the United States with osteoporosis are women. One out of every two women and one in four men over age 50 will break a bone in their lifetime due to osteoporosis.<sup>25</sup>

In 2003, NH adults were asked if they had ever heard of osteoporosis. Overall, 96.2% (95% CI: 95.5-96.9) said "yes". Although most NH adults had heard of osteoporosis, there were some differences in awareness by demographic characteristics.

- **Gender Differences:** Women were significantly more likely than men to have heard of osteoporosis.
- **Age Differences:** There were no significant differences by age in the proportion of adults who had heard of osteoporosis.
- **Educational Differences:** Adults with more education were more likely to have heard of osteoporosis than those with less education.
- **Income Differences:** There were no significant differences by income in the proportion of NH adults who had heard of osteoporosis.

|                       |                 |         | 95% Confidence |
|-----------------------|-----------------|---------|----------------|
| Characteristic        | Sample Size (N) | Percent | Interval       |
| Total                 | 4781            | 96.2    | 95.5-96.9      |
| Sex                   |                 |         |                |
| Male                  | 1933            | 94.3    | 93.0-95.5      |
| Female                | 2848            | 98.0    | 97.4-98.7      |
| Age                   |                 |         |                |
| 18-24                 | 236             | 95.1    | 92.0-98.2      |
| 25-34                 | 662             | 95.7    | 94.0-97.5      |
| 35-44                 | 1031            | 96.1    | 94.6-97.5      |
| 45-54                 | 1111            | 97.4    | 96.2-98.5      |
| 55-64                 | 798             | 97.1    | 95.8-98.5      |
| 65+                   | 877             | 95.4    | 93.7-97.1      |
| Education             |                 |         |                |
| Less than high school | 312             | 90.4    | 86.5-94.2      |
| High School or G.E.D. | 1346            | 95.0    | 93.4-96.6      |
| Some post high school | 1244            | 97.3    | 96.2-98.4      |
| College graduate      | 1871            | 97.5    | 96.7-98.3      |
| Household income      |                 |         |                |
| Less than \$15,000    | 347             | 93.9    | 90.9-96.9      |
| \$15,000- 24,999      | 552             | 93.8    | 91.2-96.5      |
| \$25,000- 34,999      | 516             | 97.3    | 95.7-98.9      |
| \$35,000- 49,999      | 818             | 96.8    | 95.3-98.2      |
| \$50,000- 74,999      | 869             | 97.3    | 96.1-98.5      |
| \$75,000+             | 1124            | 96.9    | 95.4-98.4      |

Table 14-1. Proportion Of NH Adults Who Have Heard Of Osteoporosis, By Demographic Characteristics, 2003 NH BRFSS

Among NH women who had heard of osteoporosis, 57.7% (95% CI: 55.5-59.9) reported they had talked with a health professional about ways to prevent osteoporosis, such as exercise and diet. Only 16.3% (95% CI: 14.3-18.3) of NH men who had heard of osteoporosis had been counseled about prevention by a health professional. The proportion of NH adults who had been counseled by a health professional about osteoporosis varied by age. NH women aged 44 to 64 were significantly more likely to have spoken with a health professional about osteoporosis than women 18 to 44 or women 65 and older. There were no significant differences by age in the proportion of NH men who had heard of osteoporosis and had been counseled by a health professional about prevention. (Table 14-2)

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|                | Sample Size |         | 95% Confidence |
|----------------|-------------|---------|----------------|
| Characteristic | (N)         | Percent | Interval       |
| Females        |             |         |                |
| Total          | 2782        | 57.7    | 55.5-59.9      |
| 18 to 44       | 1119        | 45.1    | 41.7-48.5      |
| 44 to 64       | 1071        | 73.1    | 70.1-76.1      |
| 65 and older   | 545         | 62.3    | 57.9-66.8      |
| Males          |             |         |                |
| Total          | 1828        | 16.3    | 14.3-18.3      |
| 18 to 44       | 733         | 15.5    | 12.3-18.6      |
| 44 to 64       | 788         | 16.2    | 13.3-19.1      |
| 65 and older   | 288         | 19.5    | 14.5-24.5      |

Table 14-2. Proportion Of NH Adults Who Have Been Counseled About Osteoporosis Prevention By A Health Professional, Among Those Who Have Heard Of Osteoporosis, By Gender And Age, 2003 NH BRFSS

Healthy New Hampshire 2010 established an objective for increasing calcium intake among adults in NH. The objective was to increase the percentage of adults in NH who meet dietary recommendations for calcium to 75% by 2010. The report found that osteoporosis could be prevented by an adequate calcium intake and regular physical activity, particularly weight- bearing activity.

The BRFSS question used to measure this indicator has not been asked since the baseline was established.



HNH2010 Objective: Increase the percentage of persons who meet dietary recommendations for calcium.

83

75% 37%

### 15. Sunburn

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Skin cancer is the most commonly diagnosed cancer in the U.S.<sup>26</sup> Of the three types of skin cancer, basal and squamous cell carcinoma and malignant melanoma, it is melanoma that is the most serious. In 2002, there were 356 cases of malignant melanoma diagnosed in New Hampshire making it the sixth most commonly diagnosed cancer in NH in 2002.<sup>27</sup>

CDC reports that exposure to the sun's ultraviolet (UV) rays appears to be the most important environmental factor involved in the development of skin cancer. When used consistently, protective practices can prevent skin cancer.<sup>26</sup> UV rays from artificial sources of light, such as tanning beds and sunlamps, are as dangerous as those from the sun and should also be avoided.<sup>26</sup> Although both tanning and burning can increase a person's risk of skin cancer, most Americans do not consistently protect themselves from UV rays.<sup>26</sup>

In 2004, 42.6% (95% CI: 40.9 - 44.2) of NH adult reported that they had sunburn in the previous 12 months. Of these 62.8% (95% CI: 60.2 - 65.3) had been burned by the sun more than once in the previous year. The prevalence of sunburn varies by sex, age, education and income. (Table 15-1 and Figure 15-1)

- Gender Differences: NH adult males were significantly more likely than females to have had one or more sunburns in the previous 12 months.
- Age Differences: Younger adults were significantly more likely to have had one or more sunburns in the previous 12 months than older adults.
- Educational Differences: Adults with more education were significantly more likely to have had one or more sunburns in the past 12 months than adults with less education. (Figure 15-2)
- **Income Differences:** Adults at higher incomes were significantly more likely to have had one or more sunburns in the past 12 months than adults at lower incomes.

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| Table 15-1. Proportion Of NH | Adults Who Ha | ad Sunburn In | The Previous 12 |
|------------------------------|---------------|---------------|-----------------|
| Months, 2004 NH BRFSS        |               |               |                 |

|                    | Sample   |         | 95% Confidence |
|--------------------|----------|---------|----------------|
| Characteristic     | Size (N) | Percent | Interval       |
| Total              | 5056     | 42.6    | 40.9-44.2      |
| Sex                |          |         |                |
| Male               | 2103     | 46.6    | 44.1-49.1      |
| Female             | 2953     | 38.7    | 36.6-40.8      |
| Age                |          |         |                |
| 18-24              | 241      | 62.6    | 55.9-69.2      |
| 25-34              | 631      | 58.1    | 53.8-62.4      |
| 35-44              | 1056     | 51.5    | 48.2-54.8      |
| 45-54              | 1191     | 44.4    | 41.2-47.6      |
| 55-64              | 871      | 28.0    | 24.7-31.4      |
| 65+                | 1018     | 10.2    | 8.1-12.3       |
| Education          |          |         |                |
| Less than H.S.     | 350      | 30.1    | 24.0-36.2      |
| H.S. or G.E.D.     | 1466     | 39.6    | 36.5-42.7      |
| Some post-H.S.     | 1265     | 42.7    | 39.4-46.0      |
| College graduate   | 1968     | 47.4    | 44.8-49.9      |
| Household income   |          |         |                |
| Less than \$15,000 | 392      | 24.4    | 18.3-30.6      |
| \$15,000- 24,999   | 615      | 34.3    | 29.5-39.1      |
| \$25,000- 34,999   | 504      | 35.6    | 30.3-40.9      |
| \$35,000- 49,999   | 759      | 42.1    | 37.8-46.3      |
| \$50,000- 74,999   | 901      | 49.6    | 45.9-53.4      |
| \$75,000+          | 1256     | 52.5    | 49.4-55.6      |

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Table 15.2 represents the proportion of NH adults reporting sunburn in the previous 12 months for the years 2003 and 2004. This question was not asked in 2001 and 2002. There was no significant change in the prevalence of NH adults reporting sunburn between 2003 and 2004.

| wontins, | 2004 NIT DIVI 33 |         |                         |
|----------|------------------|---------|-------------------------|
| Year     | Sample Size (N)  | Percent | 95% Confidence Interval |
| 2001     | NA               | NA      | NA                      |
| 2002     | NA               | NA      | NA                      |
| 2003     | 5019             | 40.9    | 39.3-42.5               |
| 2004     | 5056             | 42.6    | 40.9-44.2               |

Table 15-2. Proportion Of NH Adults Who Had Sunburn In The Previous 12Months, 2004 NH BRFSS

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



### 16. Family Planning

Unintended pregnancies may place the health of both mother and infant at risk.<sup>28</sup> Many negative outcomes of both planned and unplanned pregnancies can be prevented with interventions prior to conception.<sup>28</sup> Examples include folic acid use to prevent neural tube defects, cessation of alcohol and tobacco use and initiation of early pre-natal care.<sup>29</sup> CDC recommends that each man, woman and couple develop a reproductive health plan to reduce unintended pregnancies and fetal exposures to harmful substances and to improve women's health and pregnancy outcomes.<sup>29</sup>

The NH BRFSS asked NH women aged 18 to 45, who had not had a hysterectomy and who were not currently pregnant, and men aged 18 to 60 years a series of questions regarding pregnancy planning and use of contraception. In 2004, 67.0% (95% CI: 64.8-69.2) of these adults said they and their partner were using some method to avoid pregnancy.

Figure 16.1 and Table 16.1 examine the use of contraception by sex, education and income. Because of differences for men and women in child bearing ages and in the definition of the at risk population used for the BRFSS, age and gender are presented in a separate table (Table 16-2).

- Educational Differences: There were no significant differences by level of education.
- **Income Differences:** Adults with incomes between \$25,000 and \$34,999 were significantly less likely to use contraception than adults with higher incomes.

#### Figure 16-1. Proportion Of NH Adults At Risk For Conceiving A Pregnancy Who Used Some Form Of Pregnancy Prevention, By Gender, 2004 NH BRFSS



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| Characteristic        | Sample Size<br>(N) | Percent | 95% Confidence<br>Interval |
|-----------------------|--------------------|---------|----------------------------|
| Total                 | 2442               | 67.0    | 64.8-69.2                  |
| Education             |                    |         |                            |
| Less than high school | 145                | 57.6    | 48.1-67.1                  |
| High School or G.E.D. | 654                | 67.0    | 62.8-71.2                  |
| Some post high school | 623                | 67.5    | 63.1-71.9                  |
| College graduate      | 1019               | 68.4    | 65.1-71.7                  |
| Household income      |                    |         |                            |
| Less than \$15,000    | 130                | 57.9    | 48.1-67.8                  |
| \$15,000- 24,999      | 226                | 69.8    | 63.0-76.6                  |
| \$25,000- 34,999      | 230                | 57.0    | 49.1-64.9                  |
| \$35,000- 49,999      | 374                | 71.9    | 66.6-77.2                  |
| \$50,000- 74,999      | 523                | 70.8    | 66.3-75.3                  |
| \$75,000+             | 767                | 68.6    | 64.8-72.4                  |

Table 16-1. Proportion Of NH Adults At Risk For Conception Who Used SomeType Of Contraception, By Education and Income, 2004 NH BRFSS

Table 16-2 represents the proportion of adults at risk for conception using some type of contraception by age and gender. The definition used for this at-risk population did not include women over 45 years of age.

- **Gender Differences:** Women at risk for conception were significantly more likely than men to use some type of contraception.
- Age Differences: NH males, aged 55 to 64 years, were significantly less likely to use some type of contraception than males at other ages in the at-risk population. There were no significant differences by age in the proportion of women at risk and using some type of contraception.

|          | Males    |         |            | Females  |         |            |
|----------|----------|---------|------------|----------|---------|------------|
|          |          |         | 95%        |          |         | 95%        |
| -        | Sample   |         | Confidence | Sample   |         | Confidence |
| Age      | Size (N) | Percent | Interval   | Size (N) | Percent | Interval   |
| Total    | 1455     | 61.5    | 58.6-64.4  | 987      | 76.3    | 73.1-79.4  |
| Age      |          |         |            |          |         |            |
| 18 to 24 | 105      | 60.8    | 50.6-70.9  | 113      | 72.3    | 63.1-81.4  |
| 25 to 34 | 228      | 67.7    | 61.2-74.2  | 344      | 78.0    | 73.4-82.6  |
| 35 to 44 | 399      | 68.3    | 63.3-73.4  | 530      | 77.1    | 73.4-80.9  |
| 45 to 54 | 492      | 59.7    | 54.9-64.6  | 0        | NA      | NA         |
| 55 to 64 | 231      | 37.6    | 30.9-44.3  | 0        | NA      | NA         |

# Table 16-2. Proportion Of NH Adults At Risk For Conception Who Used Some Type Of Contraception, By Sex And Age, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

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NH adults at risk for conception, who said they used some method to prevent pregnancy, were asked what method they used. Table 16-3 represents the different methods of contraception used by NH adults at risk for initiating a pregnancy in 2004. Most, 42.3%, used a surgical method including vasectomy and tubal ligation.

 Table 16-3. Proportion Of NH Adults At Risk For Conception Using Various

 Methods To Prevent Pregnancy, 2004 NH BRFSS

|   | Sample Size |         | 95% Confidence |
|---|-------------|---------|----------------|
| Method  | (N)         | Percent | Interval       |
| Surgical method (tubal ligation (tubes tied), hysterectomy, vasectomy)                        | 727         | 42.3    | 40.5-44.1      |
| Drugs (contraceptive pill, implant, shot or patch)  | 404         | 30.6    | 28.8-32.4      |
| Condoms   | 260         | 18.3    | 16.9-19.8      |
| External Contraceptives (diaphragm,<br>cervical ring or cap, IUD or foam, jelly<br>or creams) | 81          | 4.9     | 4.2-5.6        |
| Withdrawal, Rhythm, Abstinence  | 58          | 3.9     | 3.2-4.5        |

Percentages in this table add to 100%. Each estimate represents the percentage of respondents using contraception who answered the question regarding type used.

In 2002, the NH BRFSS asked women 18 to 44 years of age what their usual source of service was for female health issues. Most NH women reported that their usual source was a general or family physician. (Table 16-4)

Table 16-4. Usual Source of Care For Female Health Issues, Among NH Women Aged 18 to 44 Years Of Age, 2002 NH BRFSS

|                             | Sample Size |         | 95% Confidence |
|-----------------------------|-------------|---------|----------------|
| Source of care              | (N)         | Percent | Interval       |
| General or Family Physician | 1251        | 45.9    | 43.8-48.1      |
| Private Gynecologist        | 1031        | 37.7    | 35.6-39.7      |
| Family planning clinic      | 136         | 5.3     | 4.3-6.3        |
| Health department clinic    | 97          | 3.9     | 3.0-4.9        |
| Community Health Center     | 103         | 3.6     | 2.9-4.4        |
| Some Other Kind of Place    | 109         | 3.6     | 2.8-4.4        |

Percentages in this table add to 100%. Each estimate represents the percentage of respondents answering the question regarding source of care.

For more information about family planning:

Contact the Family Planning Program at NH DHHS 603-271-4517 (1-800-852-3345 Ex. 4517 in NH)

http://www.dhhs.state.nh.us/DHHS/MCH/

or the Centers for Disease Control and Prevention Reproductive Health Program at:

www.cdc.gov/reproductivehealth/UnintendedPregnancy

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### 17. Immunizations

The prevalence of many once common infectious diseases has been greatly reduced due to vaccinations.<sup>30</sup> Influenza or "the flu" is a contagious respiratory illness caused by a virus.<sup>30</sup> 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 fall.<sup>30</sup>

While most people who wish to avoid being sick from the flu can get vaccinated, CDC recomends that people with certain risk factors make vaccination a priority each year.<sup>30</sup> Currently, CDC recommends that people at high risk for complications from the flu, be vaccinated annually. These include:<sup>31</sup>

- Children aged 6–59 months;
- Pregnant women;
- People 50 years of age and older;
- People of any age with certain chronic medical conditions;
- 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:

- 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 (influenza vaccine is not approved for use in this age group) and;
- People who have a moderate or severe illness with a fever should wait to get vaccinated until their symptoms lessen.

In 2004, the BRFSS asked NH adults about recent flu vaccinations. The BRFSS found that, overall, 34.0% of NH adults had a flu shot in the past 12 months. Figure 17-1 and Table 17-1 represent the proportion of NH adults having a flu shot by demographic characteristics.

- **Gender Differences:** There were no significant differences by gender in the proportion of NH adults receiving flu shots in 2004.
- Age Differences: Older adults were significantly more likely to have received a flu shot in 2004 than younger adults. (Figure 17-1)
- Educational Differences: There were no significant differences by level of education in the proportion of NH adults receiving flu shots in 2004.
- **Income Differences:** There were no significant differences by income in the proportion of NH adults receiving flu shots in 2004.

# Figure 17-1. Proportion Of NH Adults Receiving A Flu Shot By Age, 2004 NH BRFSS



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|                          | Sample Size |         |                         |
|--------------------------|-------------|---------|-------------------------|
| Characteristic           | (N)         | Percent | 95% Confidence Interval |
| Total                    | 5055        | 34.0    | 32.5-35.5               |
| Sex                      |             |         |                         |
| Male                     | 2102        | 32.8    | 30.5-35.0               |
| Female                   | 2953        | 35.2    | 33.3-37.2               |
| AGE                      |             |         |                         |
| 18-24                    | 239         | 19.2    | 13.9-24.4               |
| 25-34                    | 631         | 21.5    | 17.9-25.2               |
| 35-44                    | 1058        | 21.0    | 18.3-23.7               |
| 45-54                    | 1192        | 30.6    | 27.6-33.5               |
| 55-64                    | 872         | 45.4    | 41.8-49.1               |
| 65+                      | 1016        | 70.7    | 67.7-73.8               |
| Education                |             |         |                         |
| Less than high school    | 349         | 31.8    | 26.0-37.5               |
| High School or<br>G.E.D. | 1463        | 31.4    | 28.7-34.0               |
| Some post high school    | 1267        | 31.9    | 28.9-34.8               |
| College graduate         | 1969        | 37.9    | 35.4-40.3               |
| Household income         |             |         |                         |
| Less than \$15,000       | 393         | 38.7    | 32.9-44.5               |
| \$15,000- 24,999         | 615         | 37.9    | 33.4-42.5               |
| \$25,000- 34,999         | 502         | 30.5    | 25.8-35.3               |
| \$35,000- 49,999         | 760         | 31.4    | 27.7-35.0               |
| \$50,000- 74,999         | 902         | 30.9    | 27.6-34.3               |
| \$75,000+                | 1258        | 32.7    | 29.8-35.5               |

## Table 17-1. Proportion Of NH Adults Receiving A Flu Shot By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Table 17.2 represents the proportion of NH adults reporting they received a flu shot in 2001 through 2004. There was a significant increase in the proportion of NH adults vaccinated for flu between 2001 and 2004.

| Table 17-2. Proportion Of NH Adults Receiving A Flu Shot By Year, 2 | 001-2004 |
|---|----------|
| NH BRFSS  |          |

| Year | Sample<br>Size (N) | Percent | 95% Confidence Interval |
|------|--------------------|---------|-------------------------|
| 2001 | 4055               | 29.8    | 28.3-31.4               |
| 2002 | 5024               | 32.1    | 30.7-33.6               |
| 2003 | 5033               | 33.6    | 32.2-35.1               |
| 2004 | 5055               | 34.0    | 32.5-35.5               |

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

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Pneumococcal disease is a bacterial infection that can cause fever, blood and brain infection (meningitis) and death.<sup>32</sup> In children, pneumococcal disease is the leading cause of bacterial meningitis in children under five years and is a common cause of middle ear infection.<sup>32</sup>

Two vaccines have been developed that can prevent pneumococcal disease. One, Pneumococcal Conjugate Vaccine (PCV), is recommended for use in children.<sup>32</sup> The second, Pneumococcal Polysaccharide Vaccine (PPV) is recommended for adults aged 65 years of age and older and for use with children who have chronic illnesses or are at increased risk of infection for other reasons.<sup>32</sup> Two or more doses of vaccine may be administered over a person's lifetime.<sup>32</sup>

The BRFSS asks adults whether they had ever received a pneumonia shot. In 2004, 22.0% of NH adults reported they had received a pneumonia shot at some time. Table 17-3 and Figure 17-2 represent the prevalence of adults receiving a pneumonia shot by demographic characteristics in 2004.

- **Gender Differences:** There were no significant differences by gender in the percentage of NH adults receiving pneumonia vaccine in 2004.
- **Age Differences:** Older adults were significantly more likely to have received a pneumonia shot in 2004 than younger adults.
- Educational Differences: NH adults with more education were significantly less likely to have received pneumonia vaccine than adults with less education. (Figure 17-2)
- **Income Differences:** NH adults at lower incomes were significantly more likely to have received pneumonia vaccine than adults at higher incomes.

### Figure 17-2. Proportion Of NH Adults Receiving A Pneumonia Vaccine, By Level Of Education, 2004 NH BRFSS



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|                       | Sample Size |         | 95% Confidence |
|-----------------------|-------------|---------|----------------|
| Characteristic        | (N)         | Percent | Interval       |
| Total                 | 4694        | 22.0    | 20.8-23.3      |
| Sex                   |             |         |                |
| Male                  | 1875        | 22.6    | 20.7-24.5      |
| Female                | 2819        | 21.6    | 19.9-23.2      |
| AGE                   |             |         |                |
| 18-24                 | 194         | 16.3    | 11.7-21.0      |
| 25-34                 | 549         | 7.6     | 5.5-9.7        |
| 35-44                 | 975         | 10.1    | 7.9-12.3       |
| 45-54                 | 1125        | 11.8    | 9.8-13.7       |
| 55-64                 | 825         | 22.6    | 19.7-25.5      |
| 65+                   | 983         | 66.8    | 63.5-70.0      |
| Education             |             |         |                |
| Less than high school | 326         | 29.7    | 24.6-34.8      |
| High School or G.E.D. | 1370        | 24.3    | 21.9-26.7      |
| Some post high school | 1166        | 21.2    | 18.6-23.8      |
| College graduate      | 1828        | 19.2    | 17.3-21.0      |
| Household income      |             |         |                |
| Less than \$15,000    | 366         | 38.4    | 32.9-44.0      |
| \$15,000- 24,999      | 565         | 31.9    | 27.8-35.9      |
| \$25,000- 34,999      | 473         | 24.4    | 20.2-28.7      |
| \$35,000- 49,999      | 709         | 19.7    | 16.5-22.9      |
| \$50,000- 74,999      | 838         | 16.5    | 14.0-19.0      |
| \$75,000+             | 1158        | 14.6    | 12.5-16.8      |

| Table 17-3. Proportion Of NH Adults Receiving The Pneumonia Vaccine | , By |
|---|------|
| Demographic Characteristics, 2004 NH BRFSS                          |      |

Table 17-4 represents the proportion of NH adults reporting they had received the pneumococcal vaccine by year. The proportion receiving the vaccine was significantly higher in 2003 than in 2001 or 2002. The proportion receiving the vaccine in 2004 was not significantly different from the previous years presented.

### Table 17-4. Proportion Of NH Adults Receiving The Pneumococcal Vaccine, By Year, 2001-2004 NH BRFSS

| Year | Sample<br>Size (N) | Percent | 95% Confidence Interval |
|------|--------------------|---------|-------------------------|
| 2001 | 3804               | 20.3    | 18.9-21.8               |
| 2002 | 4717               | 20.9    | 19.6-22.2               |
| 2003 | 4646               | 23.9    | 22.6-25.2               |
| 2004 | 4694               | 22.0    | 20.8-23.3               |

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

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Healthy New Hampshire 2010 called the "decline in vaccine preventable disease one of the most significant public health accomplishments of the 20th century". 5 The report used BRFSS data to set the baseline for two objectives related to immunization.

In 2004, the BRFSS found that 53% (95% CI: 51-55) 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.

The second objective focused on increasing the proportion of older adults vaccinated against pneumococcal disease. In 2004, the BRFSS found that 67% (95% CI: 64 - 70) 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.

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/

www.cdc.gov/nip/

or,contact the NH DHHS Immunization Program at:

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

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### 18. Cholesterol Screening

Cardiovascular disease or heart disease is the leading cause of death for NH residents.<sup>33</sup> An average of approximately 2,800 NH residents died each year as a result of heart disease between 1999 and 2001.<sup>33</sup> Cerebrovascular disease or stroke is the third leading cause of death of NH residents. Between 1999 and 2001, an average of 656 NH residents died each year as a result of stroke.<sup>33</sup>

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. Too much cholesterol in the body can increase the risk of heart disease. Screening tests are available to detect elevated cholesterol levels, which can be treated by dietary changes and by medications.<sup>34</sup>

In 2003, NH adults were asked about cholesterol screening. Among all NH adults, 83.7% (95% CI: 82.3-85.1) reported they had their cholesterol checked at some time during their life and 79.7% (95% CI: 78.2-81.2) had their cholesterol checked in the past five years. Figure 18-1 and Table 18-1 represent the proportion of NH adults who, in 2003, said their cholesterol had been checked in the past five years, by demographic characteristics.

- **Gender Differences:** There were no significant differences by gender in the proportion of NH adults having their cholesterol checked in the past five years in 2003.
- Age Differences: Older adults were significantly more likely to have had their cholesterol checked in the past five years in 2003 than younger adults.
- Educational Differences: NH adults with more education were significantly more likely to have had their cholesterol checked in the past five years in 2003 than adults with less education. (Figure 18-1)
- **Income Differences:** NH adults with higher incomes were significantly more likely to have had their cholesterol checked in the past five years than adults at lower incomes.

# Figure 18-1. Proportion Of NH Adults Having Their Cholesterol Checked In The Past Five Years, By Level Of Education, 2003 NH BRFSS



# Table 18-1. Proportion Of NH Adults Having Their Cholesterol Checked In The Past Five Years, By Demographic Characteristics, 2003 NH BRFSS

|                       | Sample   |         | 95% Confidence |
|-----------------------|----------|---------|----------------|
| Characteristic        | Size (N) | Percent | Interval       |
| Total                 | 4920     | 79.7    | 78.2-81.2      |
| Sex                   |          |         |                |
| Male                  | 2015     | 77.8    | 75.5-80.1      |
| Female                | 2905     | 81.5    | 79.6-83.4      |
| AGE                   |          |         |                |
| 18-24                 | 222      | 45.5    | 38.8-52.3      |
| 25-34                 | 679      | 65.3    | 61.4-69.2      |
| 35-44                 | 1081     | 79.8    | 77.1-82.4      |
| 45-54                 | 1162     | 88.9    | 86.9-90.9      |
| 55-64                 | 812      | 92.7    | 90.8-94.7      |
| 65+                   | 893      | 93.5    | 91.3-95.7      |
| Education             |          |         |                |
| Less than high school | 312      | 68.2    | 61.6-74.8      |
| High School or G.E.D. | 1386     | 76.8    | 73.9-79.8      |
| Some post high school | 1283     | 78.2    | 75.2-81.2      |
| College graduate      | 1929     | 85.1    | 83.1-87.0      |
| Household income      |          |         |                |
| Less than \$15,000    | 353      | 67.0    | 60.7-73.2      |
| \$15,000- 24,999      | 560      | 75.3    | 70.4-80.1      |
| \$25,000- 34,999      | 527      | 74.7    | 69.9-79.5      |
| \$35,000- 49,999      | 838      | 78.4    | 74.9-81.9      |
| \$50,000- 74,999      | 895      | 82.8    | 79.5-86.1      |
| \$75,000+             | 1164     | 85.0    | 82.3-87.8      |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

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Among NH adults who had been tested for cholesterol, 34.2% (95% CI: 32.6-35.8) had, at some time, been told their cholesterol was high. Figure 18-2 and Table 18-2 represent the proportion of NH adults who have been screened for cholesterol and have been told their cholesterol was high, by demographic characteristics.

- **Gender Differences:** NH males, who had been tested, were significantly more likely to have been told at some time their cholesterol was high than females.
- Age Differences: Older adults who had been tested for cholesterol were significantly more likely to have been told they had high cholesterol than younger adults.
- Educational Differences: NH adults with a high school education who had been tested were significantly more likely to have had high cholesterol at some time than NH adults with college degrees.
- **Income Differences:** NH adults with incomes of less than \$15,000 and who had been tested were significantly more likely to have been told at some time they had high cholesterol than NH adults with incomes of \$75,000 or more.

#### Figure 18-2. Proportion Of NH Adults Ever Told They Had High Cholesterol, Among NH Adults Who Have Ever Been Tested, By Gender, 2003 NH BRFSS



|                       | Sample Size |         | 95% Confidence |
|-----------------------|-------------|---------|----------------|
| Characteristic        | (N)         | Percent | Interval       |
| Total                 | 4054        | 34.2    | 32.6-35.8      |
| Sex                   |             |         |                |
| Male                  | 1631        | 36.8    | 34.3-39.4      |
| Female                | 2423        | 31.8    | 29.8-33.9      |
| AGE                   |             |         |                |
| 18-24                 | 101         | 10.5    | 3.91-17.1      |
| 25-34                 | 443         | 19.7    | 15.6-23.7      |
| 35-44                 | 862         | 26.0    | 22.8-29.3      |
| 45-54                 | 1018        | 37.8    | 34.4-41.1      |
| 55-64                 | 740         | 47.5    | 43.6-51.5      |
| 65+                   | 830         | 46.5    | 42.8-50.2      |
| Education             |             |         |                |
| Less than high school | 228         | 38.8    | 31.7-45.8      |
| High School or G.E.D. | 1107        | 38.9    | 35.7-42.2      |
| Some post high school | 1046        | 34.8    | 31.6-38.0      |
| College graduate      | 1665        | 29.8    | 27.4-32.2      |
| Household income      |             |         |                |
| Less than \$15,000    | 262         | 41.6    | 34.9-48.3      |
| \$15,000- 24,999      | 436         | 38.5    | 33.4-43.7      |
| \$25,000- 34,999      | 421         | 31.6    | 26.7-36.6      |
| \$35,000- 49,999      | 678         | 32.6    | 28.6-36.6      |
| \$50,000- 74,999      | 760         | 35.7    | 31.9-39.5      |
| \$75,000+             | 1016        | 31.2    | 28.2-34.3      |

Table 18-2. Proportion Of NH Adults Ever Told They Had High Cholesterol,Among NH Adults Who Have Ever Been Tested, By DemographicCharacteristics, 2003 NH BRFSS

Table 18-3 represents the proportion of NH adults reporting they had been tested for cholesterol and told, at some time, their cholesterol was high for the years 2001 and 2003. There was no significant change between 2001 and 2003. This question was not asked in 2002 or 2004.

| Table 18-3. Proportion Of NH Adults Ever Told They Had High Cholesterol, |
|--|
| Among NH Adults Who Have Ever Been Tested, 2001, 2003 NH BRFSS           |

| Year | Sample<br>Size (N) | Percer | t 95% Confidence Interval |
|------|--------------------|--------|---------------------------|
| 2001 | 3341               | 31.0   | 29.3-32.8                 |
| 2002 | NA                 | NA     | NA                        |
| 2003 | 4054               | 34.2   | 32.6-35.8                 |
| 2004 | NA                 | NA     | NA                        |

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

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Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section 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".<sup>5</sup> 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.<sup>5</sup>

In 2004, 80% (95% CI: 78–81) 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.

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

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

http://www.dhhs.nh.gov/DHHS/NHP

#### 19. High Blood Pressure

High blood pressure or hypertension increases the risk of heart disease and stroke<sup>34</sup>, the first and third leading causes of death among NH residents.<sup>33</sup> 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, or taking anti-hypertensive medication".<sup>34</sup>

The 2003 NH BRFSS asked NH adults if a doctor or other health care provider ever told them they had high blood pressure. In 2003, 22.5% (95% CI: 21.3-23.8) of NH adults had been told at some time by a doctor, or other health professional, that they had high blood pressure. Table 19-1 and Figure 19-1 represent the proportion of NH adults with high blood pressure, by demographic characteristics.

- **Gender Differences:** There were no differences by gender in the proportion of NH adults having high blood pressure.
- Age Differences: The proportion of NH adults who had high blood pressure increased significantly with age. Only 3.7% of NH adults aged 18 to 24 years had at some time been told they had high blood pressure, compared to 52.3% of adults aged 65 years or older.
- Educational Differences: NH adults with less education were significantly more likely to have high blood pressure than adults with more education.
- **Income Differences:** NH adults with lower incomes were significantly more likely to have high blood pressure than adults at higher incomes.

# Figure 19-1. Proportion Of NH Adults Ever Told They Had High Blood Pressure, By Income, 2003 NH BRFSS.



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|                       | Sample   |         | 95% Confidence |
|-----------------------|----------|---------|----------------|
| Characteristic        | Size (N) | Percent | Interval       |
| Total                 | 5030     | 22.5    | 21.3-23.8      |
| Sex                   |          |         |                |
| Male                  | 2053     | 23.2    | 21.2-25.2      |
| Female                | 2977     | 21.9    | 20.3-23.5      |
| Age                   |          |         |                |
| 18-24                 | 245      | 3.7     | 1.03-6.33      |
| 25-34                 | 702      | 8.0     | 5.82-10.1      |
| 35-44                 | 1101     | 12.5    | 10.3-14.8      |
| 45-54                 | 1169     | 21.6    | 19.0-24.3      |
| 55-64                 | 819      | 38.5    | 34.8-42.2      |
| 65+                   | 920      | 52.3    | 48.8-55.8      |
| Education             |          |         |                |
| Less than high school | 333      | 32.4    | 26.8-38.0      |
| High School or G.E.D. | 1417     | 24.8    | 22.2-27.3      |
| Some post high school | 1315     | 22.8    | 20.3-25.2      |
| College graduate      | 1953     | 18.7    | 16.8-20.5      |
| Household income      |          |         |                |
| Less than \$15,000    | 363      | 34.3    | 28.8-39.9      |
| \$15,000- 24,999      | 582      | 31.4    | 27.2-35.7      |
| \$25,000- 34,999      | 539      | 24.6    | 20.5-28.6      |
| \$35,000- 49,999      | 853      | 23.4    | 20.2-26.6      |
| \$50,000- 74,999      | 908      | 18.3    | 15.6-21.1      |
| \$75,000+             | 1178     | 16.5    | 14.2-18.8      |

Table 19-1. Proportion Of NH Adults Ever Told They Had High Blood Pressure, By Demographic Characteristics, 2003 NH BRFSS.

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Table 19-2 represents the proportion of NH adults who reported they had been told by a health care professional that they had high blood pressure for the years 2001 and 2003. This question was not asked in 2002 or 2004. The proportion of NH adults that were told they had high blood pressure was not significantly different between 2001 and 2003.

| 2003 N | H BRFSS   |         |                         |
|--------|-----------|---------|-------------------------|
| Veer   | Sample    | Doroont | 05% Confidence Interval |
| Year   | Size (IV) | Percent | 95% Conndence Interval  |
| 2001   | 4061      | 22.8    | 21.4-24.3               |

NA

22.5

NA

### Table 19-2. Proportion Of NH Adults Told They Had High Blood Pressure, 2001, 2003 NH BRFSS

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

NA

NA

21.3-23.8

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NA

NA

5030

2002

2003

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/healthylifestylesdisease.htm

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### Chronic Conditions

#### 20. 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.<sup>35</sup> 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.<sup>35</sup> Causes for Type I diabetes are currently not well understood and not controllable; Type II diabetes is often linked to obesity and physical inactivity and heredity.<sup>35</sup>

CDC estimates that 14.6 million people in the U.S. had been diagnosed with diabetes in 2005 and an additional 6.2 million did not know they had the disease.<sup>35</sup> Overall, the direct and indirect costs of diabetes in the United States are estimated to be \$132 billion annually.<sup>35</sup>

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 2004. (Table 20-1)

Early detection, improved delivery of care, and better self-management are key for preventing diabetes complications.<sup>36</sup> Appropriate diet, monitoring, screening, and visits to health care professionals are all important pieces in successfully managing diabetes. The majority of adults with diabetes in New Hampshire, 55% (95% CI: 49.3 – 60.7) reported they had seen 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  $8.76.^{36}$  In 2004, 58.9% (95% CI: 53.2 - 64.6) 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.<sup>35</sup> In 2004, 70.8% (95% CI: 65.5 - 76.2) of NH adults with diabetes checked their own blood sugar at least once daily.

At the professional level, 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.<sup>37</sup> In 2004, the BRFSS found that 88.6% (95% CI: 84.9 – 92.2) of NH adults with diabetes reported having a

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hemoglobin  $A_{1c}$  test at least once in the previous 12 months, while 34.4% (95% CI: 28.6 - 40.1) 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.<sup>37</sup> Treatment to control glucose levels has been shown to reduce diabetes-related kidney failure by 50%.<sup>37</sup> In 2004, 28.4% (95% CI: 17.9–38.8) of NH adults with diabetes reported taking insulin, 75.1% (95% CI: 65.3–84.8) were taking diabetes pills, 10% (95% CI: 7.1 – 13.7) were taking a combination of insulin and oral mediation, while 19.9% (95% CI: 15.2 – 24.5) were taking neither medication.

Foot care programs that include regular examinations and patient education could prevent up to 85% of diabetes-related amputations. <sup>37</sup> In 2004, the BRFSS found that 63.0% (95% CI: 57.3 – 68.6) of NH adults with diabetes checked their own feet at least once daily and 77.9% (95% CI: 72.9 – 82.9) had a foot exam by a health care provider yearly. In addition, 30.7% (95% CI: 25.5 – 35.9) 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. It is estimated that screening and treatment of diabetic eye disease can reduce the development of severe vision loss by 60%.<sup>38</sup> Among adults with diabetes in New Hampshire, 76.3% (95% CI: 71.1 - 81.5) had an eye exam in which their pupils were dilated during the previous year.

An annual influenza vaccination is recommended for people with diabetes.<sup>39</sup> In 2004, 63.9% (95% CI: 58.3 - 69.4) of NH adults with diabetes reported they had received a flu vaccine in the past 12 months.

There were some significant differences in diabetes prevalence among NH adults, by demographic characteristics. (Figure 20-1 and Table 20-1)

- **Gender Differences:** The prevalence of diabetes was not significantly different for NH men and women in 2004.
- Age Differences: The prevalence of diabetes was significantly higher among older adults than younger adults. Among NH adults aged 65 and older, 17.2% had been diagnosed with diabetes in 2004 compared to 2.6% of adults aged 18 to 24 years. (Figure 20-1)
- Educational Differences: NH adults with less education had a higher prevalence of diabetes than adults with more education.
- **Income Differences:** NH adults with lower incomes were significantly more likely to have been diagnosed with diabetes than adults with higher incomes.

Figure 20-1. Proportion of NH Adults With Diabetes by Age, 2004 NH BRFSS



| Table 20-1 | . Prevalence  | Of Adults      | With Dia | betes, By | Demographic |
|------------|---------------|----------------|----------|-----------|-------------|
| Characteri | stics, 2004 N | <b>H BRFSS</b> |          |           |             |

|                    |                 |         | 95% Confidence |
|--------------------|-----------------|---------|----------------|
| Characteristic     | Sample Size (N) | Percent | Interval       |
| Total              | 5063            | 6.5     | 5.8-7.2        |
| Sex                |                 |         |                |
| Male               | 2105            | 6.8     | 5.7-7.9        |
| Female             | 2958            | 6.2     | 5.3-7.2        |
| Age                |                 |         |                |
| 18-24              | 242             | 2.6     | 0.4-4.8        |
| 25-34              | 631             | 0.7     | 0.1-1.4        |
| 35-44              | 1058            | 2.1     | 1.2-3.1        |
| 45-54              | 1193            | 6.0     | 4.5-7.5        |
| 55-64              | 871             | 12.3    | 9.9-14.8       |
| 65+                | 1021            | 17.2    | 14.6-19.8      |
| Education          |                 |         |                |
| Less than H.S.     | 350             | 10.2    | 6.9-13.5       |
| H.S. or G.E.D.     | 1465            | 8.1     | 6.6-9.6        |
| Some post-H.S.     | 1267            | 6.7     | 5.2-8.2        |
| College graduate   | 1974            | 4.4     | 3.5-5.4        |
| Household income   |                 |         |                |
| Less than \$15,000 | 393             | 16.1    | 11.7-20.6      |
| \$15,000- 24,999   | 615             | 8.6     | 6.3-10.8       |
| \$25,000- 34,999   | 504             | 7.6     | 5.2-10.1       |
| \$35,000- 49,999   | 759             | 7.0     | 5.0-8.9        |
| \$50,000- 74,999   | 904             | 3.3     | 2.1-4.6        |
| \$75,000+          | 1259            | 3.8     | 2.6-4.9        |

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Table 20-2 represents the proportion of NH adults reporting they had diabetes for the years 2001 through 2004. The prevalence of diabetes among NH adults did not change significantly between these years. (Table 20-2)

| Year | Total       | Percent | 95% Confidence Interval |
|------|-------------|---------|-------------------------|
|      | Sample Size |         |                         |
| 2001 | 4062        | 5.4     | 4.7 - 6.2               |
| 2002 | 5031        | 6.2     | 5.5 – 7.0               |
| 2003 | 5035        | 5.6     | 5.0 - 6.3               |
| 2004 | 5063        | 6.5     | 5.8 - 7.2               |

Table 20-2. Proportion Of NH Adults Who Have Diabetes, 2001-2004 NH BRFSS

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

Two Healthy New Hampshire 2010 objectives for improving diabetes care were measured using BRFSS data. The first established a target of 50% for the percentage of adults with diabetes having a glycosylated hemoglobin test (the A one C or A1C test) in the previous 12 months.

The questions measuring this indicator changed between 1999 and 2000. In 1996-1998, the years for which the baseline was set, respondents with diabetes were asked "how many times in the last year has a doctor, nurse, or other health professional checked you for glycosylated hemoglobin or hemoglobin "A one C"

Beginning in the year 2000, the BRFSS question regarding glycosylated hemoglobin was, "A test for "A one C," measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for "A one C"?" In 2000, 95% of NH adults said their provider had checked them for the A1C test (95% CI: 90 - 100) at least once in the past 12 months.<sup>4</sup>

In 2004, 95% (95% CI: 92-97) of adults with diabetes reported they had been checked for the A1C at least once in the previous 12 months. The 2004 percentage was not statistically different from the year 2000 percentage.



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HNH2010 Objective: Increase the percentage of adults with diabetes who report having had a glycosylated hemoglobin measurement in the last 12 months.

| Target               | 50% |
|----------------------|-----|
| Baseline (1996-1998) | 19% |
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.

In 2004, 76% (95% CI: 71–82) of NH adults with diabetes reporting 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% |



#### 21. Arthritis

CDC reports that 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.<sup>40</sup>

In 2003, the BRFSS asked adults a series of questions about arthritis. In NH, 26.4% of adults (95% CI: 25.1 - 27.8) said they had been diagnosed with some form of arthritis, rheumatoid arthritis, gout, lupus or fibromyalgia and 29.3% of these (95% CI: 27.2 - 31.5) were limited in their usual activities by their symptoms. Figure 21-1 and Table 21-1 represent the proportion of NH adults with some form of arthritis, by demographic characteristics.

- **Gender Differences:** NH women were significantly more likely to have been diagnosed with some type of arthritis than men.
- Age Differences: Older adults were significantly more likely to have been diagnosed with some type of arthritis than younger adults.
- **Educational Differences:** There were no significant differences by level of education in the proportion of adults diagnosed with arthritis.
- **Income Differences:** NH adults at lower incomes were more likely to be diagnosed with arthritis than adults at higher incomes.

#### Figure 21-1. Proportion Of NH Adults Diagnosed With Some Type Of Arthritis, By Income, 2003 NH BRFSS



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|                    |                 |         | 95% Confidence |
|--------------------|-----------------|---------|----------------|
| Characteristic     | Sample Size (N) | Percent | Interval       |
| Total              | 4981            | 26.4    | 25.1-27.8      |
| Sex                |                 |         |                |
| Male               | 2039            | 22.7    | 20.7-24.6      |
| Female             | 2942            | 30.0    | 28.1-31.8      |
| Age                |                 |         |                |
| 18-24              | 244             | 6.5     | 2.89-10.2      |
| 25-34              | 693             | 12.1    | 9.45-14.7      |
| 35-44              | 1086            | 15.4    | 13.0-17.7      |
| 45-54              | 1163            | 28.1    | 25.2-30.9      |
| 55-64              | 816             | 41.9    | 38.1-45.6      |
| 65+                | 910             | 54.9    | 51.4-58.5      |
| Education          |                 |         |                |
| Less than H.S.     | 331             | 30.2    | 24.7-35.6      |
| H.S. or G.E.D.     | 1409            | 28.8    | 26.1-31.4      |
| Some post-H.S.     | 1300            | 26.1    | 23.4-28.8      |
| College graduate   | 1931            | 24.1    | 22.0-26.1      |
| Household income   |                 |         |                |
| Less than \$15,000 | 361             | 40.0    | 34.2-45.8      |
| \$15,000- 24,999   | 576             | 32.9    | 28.4-37.4      |
| \$25,000- 34,999   | 539             | 28.9    | 24.6-33.1      |
| \$35,000- 49,999   | 845             | 26.2    | 22.9-29.6      |
| \$50,000- 74,999   | 901             | 21.6    | 18.7-24.5      |
| \$75,000+          | 1167            | 21.6    | 19.1-24.1      |

Table 21-1. Proportion Of NH Adults Diagnosed With Some Form Of Arthritis, By Demographic Characteristics, 2003 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

#### 22. Asthma

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As defined by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health (NIH), asthma is a chronic inflammatory disorder of the airways that causes episodes of wheezing, breathlessness, chest tightness, and coughing...<sup>\*41</sup> The severity of asthma episodes can range from mild to life-threatening.<sup>41</sup> 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.<sup>41</sup> In 1998, the estimated national direct and indirect costs related to asthma were \$11.3 billion.<sup>42</sup>

The National Asthma Education and Prevention Program recommends routine medical visits every one to six months for people with asthma.<sup>43</sup> In 2004, 47.6% of NH adults with asthma had not seen a health care provider for a routine check-up in the previous 12 months.

Asthma symptoms vary from person to person, however, with proper treatment most people with asthma can expect to have few or no symptoms.<sup>42</sup> 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.<sup>41</sup>

Among NH adults with current asthma, in 2004, 31.0% (95% CI: 26.4-35.6) reported they were free of asthma symptoms during the past 30 days while 48.3% (95% CI: 43.1-53.5) had not had an episode of asthma or asthma attack in the previous year. In 2004, 75.3% (95% CI: 70.5-80.2) of adults reported carrying out their usual activities without any limitations due to asthma symptoms during the previous 12 months.

Overall, the BRFSS found that 15.0% (13.8 - 16.2) of New Hampshire adults had been told at some time in their life that they had asthma. Among adults ever told that they had asthma in New Hampshire, 69.6% (95% CI: 65.5 - 73.6) currently had asthma in 2004.

FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM IN NEW HAMPSHIRE, 2001 – 2004 NH Department of Health and Human Services Division of Public Health Services Bureau of Disease Control and Health Statistics, Health Statistics & Data Management Section Lifetime asthma prevalence by demographic subgroup is represented in Table 22-1 and Figure 22-1.

- **Gender Differences:** NH adult females had a significantly higher prevalence of lifetime asthma than males in 2004.
- Age Differences: NH adults aged 18 to 24 years had a significantly higher prevalence of lifetime asthma than adults aged 65 years and older. (Figure 22-1)
- Educational Differences: There were no significant differences in lifetime asthma prevalence among NH adults by level of education.
- **Income Differences:** NH adults with lower incomes were more likely to have a lifetime diagnosis of asthma than higher income adults.

# Figure 22-1. Proportion Of NH Adults Ever Told They Had Asthma By A Medical Professional, By Age, 2004 NH BRFSS



| , <b></b> ,        | Sample   | ,       | 95% Confidence |
|--------------------|----------|---------|----------------|
| Characteristic     | Size (N) | Percent | Interval       |
| Total              | 5056     | 15.0    | 13.8-16.2      |
| Sex                |          |         |                |
| Male               | 2103     | 12.5    | 10.7-14.2      |
| Female             | 2953     | 17.5    | 15.9-19.0      |
| Age                |          |         |                |
| 18-24              | 242      | 21.4    | 15.6-27.2      |
| 25-34              | 629      | 14.9    | 12.0-17.7      |
| 35-44              | 1058     | 15.1    | 12.7-17.4      |
| 45-54              | 1191     | 15.3    | 13.0-17.6      |
| 55-64              | 871      | 14.0    | 11.5-16.4      |
| 65+                | 1018     | 10.9    | 8.8-13.0       |
| Education          |          |         |                |
| Less than H.S.     | 350      | 20.5    | 15.3-25.6      |
| H.S. or G.E.D.     | 1463     | 14.3    | 12.1-16.4      |
| Some post-H.S.     | 1266     | 14.7    | 12.4-17.0      |
| College graduate   | 1970     | 14.8    | 12.9-16.8      |
| Household income   |          |         |                |
| Less than \$15,000 | 392      | 24.3    | 18.9-29.8      |
| \$15,000- 24,999   | 613      | 18.6    | 14.5-22.7      |
| \$25,000- 34,999   | 504      | 13.1    | 9.3-16.8       |
| \$35,000- 49,999   | 759      | 13.4    | 10.8-16.1      |
| \$50,000- 74,999   | 903      | 13.4    | 10.8-16.1      |
| \$75,000+          | 1257     | 14.5    | 12.3-16.7      |

Table 22-1. Proportion Of NH Adults Ever Told They Had Asthma By A Medical Professional, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

The proportion of NH adults reporting they had ever been told by a health professional that they had asthma increased significantly between 2001 and 2004. (Table 22-2)

| Table 22<br>Asthma, | -2. Proportion Of<br>2001-2004 NH BF | NH Adults W<br>RFSS | /ho Have Ever Been Told 1 | They Have |
|---------------------|--------------------------------------|---------------------|---------------------------|-----------|
| Voar                | Total                                | Parcont             | 05% Confidence Interval   |           |

| Year | Total       | Percent | 95% Confidence Interval |
|------|-------------|---------|-------------------------|
|      | Sample Size |         |                         |
| 2001 | 4063        | 12.5    | 11.3-13.7               |
| 2002 | 5034        | 13.9    | 12.8-15.0               |
| 2003 | 5036        | 12.9    | 11.8-14.0               |
| 2004 | 5056        | 15.0    | 13.8-16.2               |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each year  $% \mathcal{A}$ 

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BRFSS respondents reporting ever being diagnosed with asthma were asked if they still had asthma. In 2004, the BRFSS found that 10.3% of NH adults currently had asthma. The prevalence of adult current asthma varied by demographic subgroup. (Table 22-3)

- **Gender Differences:** Females had a significantly higher prevalence of current asthma than males in 2004. (Figure 22-2)
- Age Differences: There were no significant differences by age.
- Educational Differences: Adults with less than a high school education had a significantly higher prevalence of current asthma than those who had higher levels of education.
- **Income Differences:** Adults with incomes of less than \$15,000 had a significantly higher prevalence of current asthma, compared to adults with higher incomes.

# Figure 22-2. Proportion Of NH Adults Who Currently Have Asthma By Gender, 2004 NH BRFSS



|                    | Sample Size |         | 95% Confidence |
|--------------------|-------------|---------|----------------|
| Characteristic     | (N)         | Percent | Interval       |
| Total              | 5041        | 10.3    | 9.3-11.3       |
| Sex                |             |         |                |
| Male               | 2101        | 8.3     | 6.8-9.7        |
| Female             | 2940        | 12.2    | 10.8-13.6      |
| Age                |             |         |                |
| 18-24              | 240         | 13.5    | 8.5-18.5       |
| 25-34              | 628         | 9.8     | 7.4-12.3       |
| 35-44              | 1055        | 10.6    | 8.6-12.6       |
| 45-54              | 1188        | 10.8    | 8.8-12.7       |
| 55-64              | 869         | 9.7     | 7.7-11.8       |
| 65+                | 1014        | 7.6     | 5.9-9.4        |
| Education          |             |         |                |
| Less Than H.S.     | 350         | 18.0    | 13.0-23.0      |
| H.S. Or G.E.D.     | 1455        | 8.9     | 7.2-10.6       |
| Some Post-H.S.     | 1263        | 10.3    | 8.4-12.3       |
| College Graduate   | 1966        | 9.8     | 8.2-11.4       |
| Household Income   |             |         |                |
| Less Than \$15,000 | 391         | 19.9    | 14.7-25.1      |
| \$15,000- 24,999   | 610         | 11.1    | 8.0-14.1       |
| \$25,000- 34,999   | 503         | 8.2     | 5.1-11.3       |
| \$35,000- 49,999   | 757         | 10.1    | 7.8-12.3       |
| \$50,000- 74,999   | 901         | 9.7     | 7.4-12.1       |
| \$75,000+          | 1253        | 9.5     | 7.6-11.4       |

Table 22-3. Proportion Of NH Adults Who Reported They Currently Had Asthma, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

There was no significant change in the proportion of adults reporting a diagnosis of current asthma between 2001 and 2004. (Table 22-4)

| NH RKF | 55          |         |                         |
|--------|-------------|---------|-------------------------|
| Year   | Total       | Percent | 95% Confidence Interval |
|        | Sample Size |         |                         |
| 2001   | 4051        | 8.4     | 7.4-9.4                 |
| 2002   | 5024        | 8.7     | 7.8-9.6                 |
| 2003   | 5014        | 8.5     | 7.6-9.4                 |
| 2004   | 5041        | 10.3    | 9.3-11.3                |

Table 22-4. Proportion Of NH Adults Who Currently Have Asthma, 2001-2004 NH BRFSS

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

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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, <u>www.nhlbi.nih.gov</u>

### Cancer Screening

#### 23. Breast Cancer Screening

Breast cancer is the most common type of newly diagnosed cancer among New Hampshire women and was the second leading cause of cancer death (behind lung cancer) in NH women in 2001.<sup>27</sup> Detecting breast cancer early is key to surviving the disease, and regular screening is key to detecting the disease early. The five-year survival rate for localized breast cancer—before it spreads to any lymph nodes—is 98%.<sup>44</sup> Once disease has spread to include underarm lymph nodes, five-year survival decreases to 83% and if it spreads to other organs, survival decreases to 26%.<sup>44</sup>

Among the methods for early detection of breast cancer are mammography and clinical breast exam. The latter of these is an examination by a health care provider of the breast tissue. Mammography involves an x-ray examination of the breast and can detect abnormalities in the breast before they can be felt. Annual mammograms are recommended for women aged 40 and older, while clinical breast exams should be part of the regular health routine for all women.



In 2004, 19.8% (95% CI: 17.9-21.7) of NH women reported they had not had a mammogram in the previous two years. Table 23.1 examines the proportion of NH women recently screened by mammogram, by demographic characteristics.

- Age Differences: Women aged 40 to 44 were significantly more likely to not have had a mammogram in the previous two years than women 65 and older.
- Educational Differences: Women with less education were significantly more likely to not have had a mammogram in the previous two years than women with higher levels of education.
- Income Differences: Women with lower incomes were significantly more likely to have not had a mammogram in the previous two years than women with higher incomes. (Figure 23-1)

## Figure 23-1. No Mammogram In The Previous Two Years, NH Women 40 Years And Older, By Income, 2004 NH BRFSS



|                    | Sample   |         | 95% Confidence |
|--------------------|----------|---------|----------------|
| Characteristics    | Size (N) | Percent | Interval       |
| Females Only       |          |         |                |
| Sex                |          |         |                |
| Female             | 2074     | 19.8    | 17.9-21.7      |
| Age                |          |         |                |
| 40-44              | 325      | 31.5    | 26.0-37.0      |
| 45-54              | 657      | 18.7    | 15.5-22.0      |
| 55-64              | 483      | 13.2    | 10.1-16.4      |
| 65+                | 609      | 18.2    | 14.9-21.6      |
| Education          |          |         |                |
| Less Than H.S.     | 141      | 26.2    | 18.6-33.8      |
| H.S. Or G.E.D.     | 630      | 21.5    | 18.0-25.0      |
| Some Post-H.S.     | 557      | 21.6    | 17.7-25.6      |
| College Graduate   | 743      | 15.6    | 12.8-18.4      |
| Household Income   |          |         |                |
| Less Than \$15,000 | 212      | 33.9    | 27.0-40.9      |
| \$15,000- 24,999   | 282      | 24.9    | 19.1-30.7      |
| \$25,000- 34,999   | 213      | 18.2    | 12.4-24.0      |
| \$35,000- 49,999   | 313      | 21.6    | 16.5-26.8      |
| \$50,000- 74,999   | 312      | 22.4    | 17.1-27.7      |
| \$75,000+          | 425      | 12.3    | 8.9-15.7       |

Table 23-1. No Mammogram In The Previous Two Years, NH Women 40 Years And Older, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Table 23-2 represents the proportion of NH women, aged 40 years and older, who reported they had not had a mammogram in the previous two years for 2002 and 2004. These questions were not asked in 2001 or 2003. There was no significant difference in the proportion of NH women, 40 and older, not having a mammogram in the previous two years between 2002 and 2004.

Table 23-2. No Mammogram In The Previous Two Years, NH Women 40 Years And Older, 2002, 2004 NH BRFSS

|      | , ,         |         |                         |
|------|-------------|---------|-------------------------|
| Year | Total       | Percent | 95% Confidence Interval |
|      | Sample Size |         |                         |
| 2001 | NA          | NA      | NA                      |
| 2002 | 1890        | 19.5    | 17.4-21.5               |
| 2003 | NA          | NA      | NA                      |
| 2004 | 2074        | 19.8    | 17.9-21.7               |

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

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In 2004, the BRFSS found that 72.8% (95% CI: 70.8 - 74.7) of NH women had their last clinical breast exam within the past year (Figure 23-2 and Table 23-3) while 6.3% (95% CI: 5.1 - 7.6) of women had never had a clinical breast exam.



# Figure 23-2. Time Since Last Clinical Breast Exam, NH Women Aged 18 Years and Older, 2004 NH BRFSS

## Table 23-3. Time Since Last Clinical Breast Exam, NH Women Aged 18 and Older, 2004 NH BRFSS

| Time since last CBE | Sample Size | Percent | 95% Confidence |
|---------------------|-------------|---------|----------------|
| Past year           | 2107        | 72.8    | 70.8 – 74.7    |
| Past 2 years        | 366         | 12.3    | 10.9 – 13.7    |
| Past 3 years        | 116         | 3.7     | 3.0 - 4.5      |
| Past 5 years        | 56          | 1.9     | 1.3 – 2.5      |
| 5 or more years     | 102         | 3.0     | 2.3 - 3.6      |
| Never               | 150         | 6.4     | 5.1 – 7.6      |

Percentages in this table add to 100%. Each estimate represents the percentage of respondents answering the question regarding the time of their last CBE.



#### For more information about how to access breast and cervical cancer screening services in New Hampshire, contact:

The NH DHHS' "Let No Woman Be Overlooked" program at 1-800-852-3345 ext. 4931 (in NH) or 1-603-271-4931.

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#### 24. Cervical Cancer Screening

Cervical cancer accounted for about 2% of newly diagnosed cancer cases and 1% of cancer deaths among women in New Hampshire in 2002.<sup>27</sup> Cervical cancer is a highly treatable cancer. Detected early, in its non-invasive stage, cervical cancer survival is near 100%.<sup>44</sup> However, the American Cancer Society (ACS) estimates that 60–80% of all women diagnosed with invasive cervical cancer have not been screened with a Papanicolaou test (Pap test) in the past five years.<sup>45</sup> The Pap test inspects a sample of the cells lining the cervix to detect cancerous or precancerous cells.<sup>45</sup> The test is performed in a health care setting and should be part of the regular health care for women 18 years and older.<sup>45</sup>



Overall 96.8% (95% CI: 95.4–98.1) of NH women reported that they had a Pap test in their lifetime. Although the BRFSS found that a small proportion of NH women have never had a Pap test, there were significant variations in the prevalence of never having a Pap test, by demographic characteristics (Figure 24-1, Table 24-1).

- Age Differences: NH Women aged 18 to 24 and women aged 65 years and older were significantly more likely than women of other ages to have never had a Pap test. (Figure 24-1)
- Educational Differences: Women with less than a high school education were significantly more likely to have never had a Pap test than women with college degrees.
- **Income Differences:** Women with incomes of less than \$15,000 per year were significantly more likely to have never had a Pap test than women with incomes over \$35,000.

## Figure 24-1. Proportion Of NH Women Who Have Never Had A Pap Test, By Age, 2004 NH BRFSS



|                    | Sample   |         | 95% Confidence |
|--------------------|----------|---------|----------------|
| Characteristic     | Size (N) | Percent | Interval       |
| Females Only       |          |         |                |
| Sex                |          |         |                |
| Female             | 2924     | 4.4     | 3.3-5.4        |
| Age                |          |         |                |
| 18-24              | 127      | 15.9    | 8.8-23.1       |
| 25-34              | 384      | 1.8     | 0.4-3.2        |
| 35-44              | 623      | 0.4     | 0.0-0.9        |
| 45-54              | 658      | 1.0     | 0.2-1.8        |
| 55-64              | 483      | 1.5     | 0.5-2.6        |
| 65+                | 614      | 9.7     | 6.7-12.7       |
| Education          |          |         |                |
| Less Than H.S.     | 184      | 12.6    | 6.5-18.8       |
| H.S. Or G.E.D.     | 861      | 5.4     | 3.3-7.6        |
| Some Post-H.S.     | 807      | 4.4     | 2.2-6.7        |
| College Graduate   | 1069     | 2.0     | 0.7-3.2        |
| Household Income   |          |         |                |
| Less Than \$15,000 | 267      | 9.4     | 5.2-13.5       |
| \$15,000- 24,999   | 387      | 4.4     | 2.2-6.6        |
| \$25,000- 34,999   | 301      | 7.2     | 1.3-13.1       |
| \$35,000- 49,999   | 436      | 1.5     | 0.2-2.8        |
| \$50,000- 74,999   | 485      | 1.9     | 0.0-4.1        |
| \$75,000+          | 625      | 1.7     | 0.3-3.2        |

 Table 24-1. Proportion Of NH Women Aged 18 Years And Older, Who Have

 Never Had A Pap Test, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Table 24-2 represents the proportion of NH women, aged 18 years and older that, in 2002 and 2004, reported never having a Pap test. This question was not asked in 2001 or 2003. There was no significant change in the proportion of NH women never having a Pap test between 2002 and 2004.

| Table 24-2. Proportion Of NH Women Aged 18 Years And Older, Who Have | е |
|--|---|
| Never Had A Pap Test, By Demographic Characteristics, 2004 NH BRFSS  |   |

| Year | Total       | Percent | 95% Confidence Interval |
|------|-------------|---------|-------------------------|
|      | Sample Size |         |                         |
| 2001 | NA          | NA      | NA                      |
| 2002 | 2924        | 4.2     | 3.2-5.1                 |
| 2003 | NA          | NA      | NA                      |
| 2004 | 2924        | 4.4     | 3.3-5.4                 |

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

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Table 24-3 and Figure 24-2 represent the proportion of NH women who, in 2004, reported they had a Pap test in the previous three years, by demographic characteristics.

- Age Differences: Women aged 25 to 64 years were significantly more likely to have had a Pap test in the previous three years than women of other ages.
- Educational Differences: Women with a college degree were significantly more likely to have had a Pap test in the past three years than women with less education. Women with less than a high school diploma were significantly less likely to have had a Pap test in the past three years than women with other levels of education. (Figure 24.2)
- **Income Differences:** Women with household incomes of \$35,000 or more were significantly more likely to have had a Pap test in the previous three years than women with lower incomes.

# Figure 24-2, Proportion Of NH Women Having A Pap Test In The Previous Three Years, By Level Of Education, 2004 NH BRFSS



|                    | Sample   |         | 95% Confidence |
|--------------------|----------|---------|----------------|
| Characteristic     | Size (N) | Percent | Interval       |
| Females Only       |          |         |                |
| Sex                |          |         |                |
| Female             | 2278     | 89.8    | 88.2-91.3      |
| Age                |          |         |                |
| 18-24              | 127      | 84.0    | 76.9-91.2      |
| 25-34              | 381      | 95.2    | 92.7-97.7      |
| 35-44              | 558      | 92.7    | 90.3-95.2      |
| 45-54              | 536      | 92.8    | 90.4-95.3      |
| 55-64              | 330      | 92.2    | 88.9-95.5      |
| 65+                | 346      | 75.0    | 69.9-80.1      |
| Education          |          |         |                |
| Less Than H.S.     | 117      | 72.8    | 63.2-82.3      |
| H.S. Or G.E.D.     | 632      | 88.3    | 85.2-91.4      |
| Some Post-H.S.     | 629      | 88.4    | 85.1-91.7      |
| College Graduate   | 899      | 94.3    | 92.5-96.1      |
| Household Income   |          |         |                |
| Less Than \$15,000 | 168      | 75.7    | 67.9-83.5      |
| \$15,000- 24,999   | 277      | 85.3    | 80.7-90.0      |
| \$25,000- 34,999   | 232      | 83.0    | 76.0-90.1      |
| \$35,000- 49,999   | 347      | 93.1    | 90.3-95.9      |
| \$50,000- 74,999   | 410      | 94.0    | 90.8-97.3      |
| \$75,000+          | 548      | 96.3    | 94.3-98.2      |

### Table 24-3. Pap Test Within The Previous Three Years, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.



For more information about how to access breast and cervical cancer screening services in New Hampshire, contact:

The NH DHHS' "Let No Woman Be Overlooked" program at 1-800-852-3345 ext. 4931 (in NH) or 1-603-271-4931.

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#### 25. Prostate Cancer Screening

Prostate cancer was the most common type of newly diagnosed cancer in NH in 2002.<sup>27</sup> It was the second leading cause of cancer death (behind lung) among NH men in 2002.<sup>27</sup> The American Cancer Society recommends that doctors offer their male patients, aged 50 and older without major medical problems, tests to screen for prostate cancer.<sup>45</sup> These include the digital rectal exam (DRE) and the prostate specific antigen (PSA) test.<sup>45</sup>



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In 2004, the NH BRFSS asked men aged 40 years and older if they had ever been told by a doctor, nurse or other health professional that they had prostate cancer. Overall, 4.4% (95% CI: 3.3 - 5.5) of men aged 40 and older had received a diagnosis of prostate cancer at some time.

In 2004, the BRFSS found that 44.3% (95% CI: 41.5-47.2) of NH men, aged 40 and older, had never had a PSA test and 18.7% (95% CI: 16.4-21.0) had never had a DRE test.

Figure 25-1 and Table 25-1 represent the prevalence of lifetime PSA testing, by demographic characteristics.

- Age Differences: A significantly higher percentage of men aged 40 to 54 years had never had a PSA test. (Figure 25-1)
- Educational Differences: A significantly higher percentage of men aged 40 and over, with a high school diploma or less, had never had a PSA test.
- **Income Differences:** A significantly higher percentage of men aged 40 and older, with incomes less than \$15,000 per year, had never had a PSA test compared to men aged 40 and older with incomes of \$15,000 to \$24,999.



### Figure 25-1. Percent Of NH Men Who Have Never Had A PSA Test, By Age, 2004 NH BRFSS

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|                    | Sample Size |         | 95% Confidence |
|--------------------|-------------|---------|----------------|
| Characteristic     | (N)         | Percent | Interval       |
| Total              |             |         |                |
| Sex                |             |         |                |
| Male               | 1433        | 44.3    | 41.5-47.2      |
| Age                |             |         |                |
| 40-44              | 204         | 88.0    | 82.6-93.3      |
| 45-54              | 490         | 52.3    | 47.5-57.1      |
| 55-64              | 372         | 23.2    | 18.6-27.8      |
| 65+                | 367         | 16.3    | 12.5-20.1      |
| Education          |             |         |                |
| Less Than H.S.     | 103         | 47.6    | 36.6-58.5      |
| H.S. Or G.E.D.     | 377         | 49.4    | 43.8-55.0      |
| Some Post-H.S.     | 295         | 47.3    | 41.0-53.6      |
| College Graduate   | 655         | 39.1    | 35.1-43.2      |
| Household Income   |             |         |                |
| Less Than \$15,000 | 89          | 52.0    | 40.9-63.1      |
| \$15,000- 24,999   | 146         | 32.3    | 23.8-40.7      |
| \$25,000- 34,999   | 138         | 44.9    | 35.7-54.1      |
| \$35,000- 49,999   | 201         | 41.1    | 33.2-48.9      |
| \$50,000- 74,999   | 278         | 45.8    | 39.4-52.1      |
| \$75,000+          | 450         | 45.3    | 40.4-50.3      |

 Table 25-1. Proportion Of NH Men Aged 40 Years And Older Who Have

 Never Had A PSA Test, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Table 25-2 represents the proportion of NH men, aged 40 years and older who, in 2001, 2002 and 2004, reported never having a PSA test. This question was not asked in 2003. There was not significant change in the proportion of NH men, aged 40 and older reporting having had a PSA test between 2001 and 2004.

| Table 25-2. Proportion Of NH Men Aged 40 Years And 0 | Older, Who Have Never |
|--|-----------------------|
| Had A PSA Test, By Year, NH BRFSS                    |                       |

| Year | Sample Size (N) | Percent | 95% Confidence Interval |
|------|-----------------|---------|-------------------------|
| 2001 | 999             | 41.7    | 38.4-45.0               |
| 2002 | 1316            | 40.9    | 38.0-43.8               |
| 2003 | NA              | NA      | NA                      |
| 2004 | 1433            | 44.3    | 41.5-47.2               |

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

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Figure 25.2 and Table 25.3 represent the proportion of NH men aged 40 years and older who, in 2004, had a PSA test in the previous two years by demographic characteristics.

- Age Differences: Men aged 55 and older, were significantly more likely to have had a recent PSA test than younger men. (Figure 25-2)
- Educational Differences: Men with a college degree were significantly more likely to have had a recent PSA test than men with a high school diploma or less.
- **Income Differences:** There were no significant differences by income in the proportion of NH men aged 40 and older having a recent PSA test.

#### Figure 25-2. Proportion Of NH Men Aged 40 Years And Older Who Have Had A PSA Test In The Past Two Years, By Age, 2004 NH BRFSS



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|                    | Sample Size |         | 95% Confidence |
|--------------------|-------------|---------|----------------|
| Characteristic     | (N)         | Percent | Interval       |
| Total              |             |         |                |
| Sex                |             |         |                |
| Male               | 1419        | 47.6    | 44.8-50.4      |
| Age                |             |         |                |
| 40-44              | 203         | 8.7     | 5.0-12.3       |
| 45-54              | 487         | 40.3    | 35.7-45.0      |
| 55-64              | 367         | 66.3    | 61.1-71.6      |
| 65+                | 362         | 73.0    | 68.0-78.1      |
| Education          |             |         |                |
| Less Than H.S.     | 103         | 38.5    | 28.7-48.3      |
| H.S. Or G.E.D.     | 373         | 41.9    | 36.6-47.3      |
| Some Post-H.S.     | 293         | 45.0    | 38.9-51.1      |
| College Graduate   | 647         | 53.8    | 49.7-58.0      |
| Household Income   |             |         |                |
| Less Than \$15,000 | 87          | 37.0    | 26.5-47.5      |
| \$15,000- 24,999   | 145         | 50.8    | 41.6-59.9      |
| \$25,000- 34,999   | 136         | 44.8    | 35.9-53.8      |
| \$35,000- 49,999   | 199         | 53.1    | 45.4-60.8      |
| \$50,000- 74,999   | 277         | 47.1    | 40.8-53.3      |
| \$75,000+          | 447         | 48.3    | 43.4-53.2      |

## Table 25-3. Proportion Of NH Men Aged 40 Years And Older Who Have Had A PSA Test In The Past Two Years, 2004 NH BRFSS.

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

# For more information about Prostate Cancer and Screening tests, contact the American Cancer Society:

www.cancer.org/

or,

the Centers for Disease Control and Prevention:

www.cdc.gov/cancer/prostate/

#### 26. Colorectal Cancer Screening

Colorectal cancer was the forth most commonly diagnosed cancer and the forth leading cause of cancer death in NH in 2002.<sup>27</sup> Colorectal cancer can be prevented. Some steps to prevent colorectal cancer include staying active, eating a diet made up of mostly fruit and vegetables, limiting alcohol and avoiding tobacco use.<sup>46</sup> Screening for colorectal cancer is also an important tool for prevention and early diagnosis.<sup>46</sup>

The U.S. Preventive Services Task Force (USPSTF) and other federal agencies, recommend regular screening for all adults aged 50 or older. <sup>46</sup> According to USPSTF, routine screening can reduce the number of people who die of colorectal cancer by as much as 60%.<sup>46</sup> Tests used to screen for colorectal cancer include: <sup>46</sup>

- Fecal occult blood test (FOBT), which checks for hidden blood in three consecutive stool samples, should be administered every year.
- Flexible sigmoidoscopy, where physicians use a flexible, lighted tube (sigmoidoscope) to inspect visually the interior walls of the rectum and part of the colon should be administered every five years.
- Double-contrast barium enema, a test that uses a series of X-rays of the colon and rectum (taken after the patient is given an enema containing barium dye followed by an injection of air in the lower bowel), should be administered every five years.
- Colonoscopy, where physicians use a flexible, lighted tube to inspect visually the interior walls of the rectum and the entire colon, should be administered every 10 years. During this procedure, samples of tissue may be collected for closer examination, or polyps may be removed.

In 2004, the BRFSS found that 35.1% (95% CI: 33.0-37.2) of adults aged 50 years and older had an FOBT in the past two years. Table 26.1 represents the proportion of NH adults 50 and older reporting that they had an FOBT test in the past two years, by demographic characteristics.

- **Gender Differences:** There were no significant differences by gender in the proportion of NH adults aged 50 years and older who had an FOBT in the past two years.
- Age Differences: NH adults aged 55 and older were significantly more likely to have had an FOBT in the past two years than adults aged 50 to 54 years. (Figure 26-1)
- Educational Differences: There were no significant differences by level of education in the proportion of NH adults aged 50 years and older who had an FOBT in the past two years.
- **Income Differences:** There were no significant differences by income in the proportion of NH adults aged 50 years and older who had an FOBT in the past two years.

### Figure 26-1. Proportion Of NH Adults 50 And Older Having A FOBT Test In The Past Two Years, By Age, 2004 NH BRFSS



| · · · · · · · · · · · · · · · · · · · | Sample   |         | 95% Confidence |
|---------------------------------------|----------|---------|----------------|
| Characteristics                       | Size (N) | Percent | Interval       |
| Total                                 | 2425     | 35.1    | 33.0-37.2      |
| Sex                                   |          |         |                |
| Male                                  | 1019     | 34.6    | 31.3-37.8      |
| Female                                | 1406     | 35.6    | 32.8-38.4      |
| Age                                   |          |         |                |
| 50-54                                 | 587      | 27.5    | 23.2-31.7      |
| 55-64                                 | 855      | 37.6    | 34.1-41.1      |
| 65+                                   | 983      | 37.8    | 34.5-41.2      |
| Education                             |          |         |                |
| Less Than H.S.                        | 195      | 28.3    | 21.0-35.7      |
| H.S. Or G.E.D.                        | 728      | 34.7    | 30.8-38.6      |
| Some Post-H.S.                        | 575      | 35.3    | 30.9-39.7      |
| College Graduate                      | 921      | 36.7    | 33.3-40.1      |
| Household Income                      |          |         |                |
| Less Than \$15,000                    | 259      | 30.9    | 24.2-37.6      |
| \$15,000- 24,999                      | 361      | 32.1    | 26.6-37.5      |
| \$25,000- 34,999                      | 253      | 39.9    | 32.9-47.0      |
| \$35,000- 49,999                      | 345      | 38.0    | 32.3-43.8      |
| \$50,000- 74,999                      | 383      | 33.0    | 28.0-38.0      |
| \$75,000+                             | 478      | 39.1    | 34.4-43.8      |

# Table 26-1. Proportion Of NH Adults 50 And Older Having A FOBT Test In The Past Two Years, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Figure 26-2 and Table 26-2 represent the proportion of NH adults aged 50 years and older who, in 2004, reported they had at some time had a colonoscopy or sigmoidoscopy, by demographic characteristics.

- **Gender Differences:** Males aged 50 years and older were significantly more likely to have had a colonoscopy or sigmoidoscopy than females aged 50 years and older.
- **Age Differences:** Adults aged 55 and older were significantly more likely to have had colonoscopy or sigmoidoscopy than adults 50 to 54 years.
- **Educational Differences:** Adults aged 50 and older with a college degree were significantly more likely to have had a colonoscopy or sigmoidoscopy than adults with less education.
- **Income Differences:** Adults aged 50 and older with incomes over \$35,000 were significantly more likely to have had a colonoscopy or sigmoidoscopy than adults aged 50 and older with incomes of \$15,000 or less. (Figure 26-2)

#### Figure 26-2. Proportion Of NH Adults 50 And Older Ever Having A Colonoscopy Or Sigmoidoscopy, By Income, 2004 NH BRFSS



| Table 26-2. Proportion Of NH Adults 50 A | And Older Ever Having A Colonoscopy |
|--|-------------------------------------|
| Or Sigmoidoscopy, By Demographic Cha     | aracteristics, 2004 NH BRFSS        |

|                    | Sample Size |         | 95% Confidence |
|--------------------|-------------|---------|----------------|
| Characteristics    | (N)         | Percent | Interval       |
| Total              | 2441        | 62.2    | 60.1-64.4      |
| Sex                |             |         |                |
| Male               | 1021        | 65.8    | 62.6-69.1      |
| Female             | 1420        | 59.1    | 56.2-61.9      |
| Age                |             |         |                |
| 50-54              | 586         | 48.0    | 43.4-52.5      |
| 55-64              | 865         | 63.9    | 60.4-67.4      |
| 65+                | 990         | 69.8    | 66.6-72.9      |
| Education          |             |         |                |
| Less Than H.S.     | 193         | 49.6    | 41.8-57.4      |
| H.S. Or G.E.D.     | 732         | 58.5    | 54.5-62.4      |
| Some Post-H.S.     | 573         | 60.7    | 56.2-65.2      |
| College Graduate   | 937         | 68.5    | 65.3-71.8      |
| Household Income   |             |         |                |
| Less Than \$15,000 | 258         | 48.6    | 41.7-55.4      |
| \$15,000- 24,999   | 359         | 59.6    | 53.9-65.4      |
| \$25,000- 34,999   | 253         | 61.6    | 54.8-68.3      |
| \$35,000- 49,999   | 348         | 61.5    | 55.8-67.2      |
| \$50,000- 74,999   | 384         | 68.3    | 63.3-73.3      |
| \$75,000+          | 483         | 65.8    | 61.2-70.5      |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

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The proportion of NH adults reporting they ever had a sigmoidoscopy or colonoscopy in 2004 was significantly higher than in 2001 and 2002. (Table 26-3) This question was not asked in 2003.

# Table 26-3. Proportion Of NH Adults 50 And Older Ever Having A Colonoscopy Or Sigmoidoscopy, 2001, 2002 and 2004 NH BRFSS

|      | Total       |         |                         |  |
|------|-------------|---------|-------------------------|--|
| Year | Sample Size | Percent | 95% Confidence Interval |  |
| 2001 | 1608        | 52.0    | 49.3-54.6               |  |
| 2002 | 2100        | 50.1    | 47.8-52.5               |  |
| 2003 | NA          | NA      | NA                      |  |
| 2004 | 2441        | 62.2    | 60.1-64.4               |  |
| 2004 | 2771        | 02.2    | 00.1-04.4               |  |

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

For more information on colorectal cancer screening, contact the American Cancer Society: <u>www.cancer.org/</u>

> Or the Centers for Disease Control and Prevention: <u>www.cdc.gov/cancer/colorectal/</u>

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### Infectious Disease Risk and Awareness

#### 27. HIV/AIDS

The National Institutes of Health (NIH) reports that "AIDS (acquired immunodeficiency syndrome) was first reported in the United States in 1981 and has since become a major worldwide epidemic.<sup>47</sup> 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.<sup>47</sup>

More than 900,000 cases of AIDS have been reported in the United States since 1981. As many as 950,000 Americans may be infected with HIV, one-quarter of whom are unaware of their infection".<sup>47</sup>

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. <sup>47</sup> 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.<sup>47</sup>

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.<sup>47</sup> If the mother takes certain drugs during pregnancy, she can significantly reduce the chances that her baby will get infected with HIV.<sup>47</sup> 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.<sup>47</sup> HIV infection of newborns has been almost eradicated in the United States due to appropriate treatment".<sup>47</sup>

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.<sup>47</sup>

In 2004, the BRFSS asked adults aged 18–64 years a series of questions regarding HIV. Among these adults, 42.5% reported being tested for HIV at some time (Table 27-1) and 2.9% (95% CI: 2.3 - 3.6) reported engaging in some type of activity in the last year, which put them at risk of contracting HIV.

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Figure 27-1 and Table 27-1 represent the proportion of NH adults aged 18 to 64 years reporting ever being tested for HIV, by demographic characteristics, not including testing during blood transfusions.

- **Gender Differences:** There were no significant differences by gender in the proportion of NH adults 18 to 64 years ever tested for HIV.
- Age Differences: In 2004, NH adults aged 25 to 44 years were significantly more likely to have been tested for HIV than adults 18 to 24 years and 45 to 64 years. (Figure 27-1)
- Educational Differences: There were no significant differences by level of education in the proportion of NH adults aged 18 to 64 tested for HIV.
- **Income differences:** Adults with incomes of \$35,000 and more were significantly less likely to have been tested for HIV than adults with incomes of \$25,000 to \$34,999.

## Figure 27-1. Proportion Of NH Adults Aged 18 To 64 Years Ever Tested For HIV By Age, 2004 NH BRFSS



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|                  | grapine ene |         | 5, 2001 111 211 00      |
|------------------|-------------|---------|-------------------------|
|                  | Sample      |         | 95% Confidence Interval |
| Characteristics  | Size (N)    | Percent |                         |
| Total            | 3736        | 42.5    | 40.7-44.4               |
| Sex              |             |         |                         |
| Male             | 1576        | 40.9    | 38.1-43.7               |
| Female           | 2160        | 44.2    | 41.8-46.5               |
| Age              |             |         |                         |
| 18-24            | 224         | 42.1    | 35.3-49.0               |
| 25-34            | 602         | 62.3    | 58.0-66.6               |
| 35-44            | 983         | 50.0    | 46.6-53.4               |
| 45-54            | 1109        | 31.3    | 28.4-34.2               |
| 55-64            | 818         | 22.7    | 19.7-25.8               |
| Education        |             |         |                         |
| Less Than H.S.   | 206         | 39.9    | 32.1-47.7               |
| H.S. Or G.E.D.   | 1019        | 41.5    | 37.9-45.0               |
| Some Post-H.S.   | 954         | 44.6    | 40.9-48.3               |
| College          | 1556        | 42.4    | 39.6-45.1               |
| Graduale         |             |         |                         |
| Income           |             |         |                         |
| Less Than        | 210         | 48.6    | 40 4-56 8               |
| \$15,000         | 210         | 40.0    | 10.1 00.0               |
| \$15,000- 24,999 | 367         | 47.9    | 41.6-54.2               |
| \$25,000- 34,999 | 350         | 53.6    | 47.2-60.0               |
| \$35,000- 49,999 | 588         | 39.8    | 35.2-44.4               |
| \$50,000- 74,999 | 765         | 41.0    | 37.1-44.9               |
| \$75,000+        | 1111        | 41.0    | 37.7-44.2               |

Table 27-1. Proportion Of NH Adults Aged 18 To 64 Years Ever Tested For HIV, By Demographic Characteristics, 2004 NH BRFSS

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

Among women who had been tested for HIV, the most commonly cited reason for the last HIV test was pregnancy (28.7%, 95% CI: 25.3 - 32.1), among men who had been tested, the most common reason for the last test was as part of a routine checkup (29.8%, 95% CI: 25.6 - 34.0). Private doctors or HMOs tested most adults for HIV (49.5%, 95% CI: 46.4 - 52.6).

In 2004, most adults (98.3%, 95% CI: 97.3 – 99.4) understood that there are medical treatments available to help people with HIV to live longer. About half, 54.5% (95% CI: 5.26 - 56.3), agreed with the statement "a pregnant woman with HIV can get treatment to help reduce the chances that she will pass the virus on to her baby".

Table 27-2 represents the percentage of NH adults aged 18 to 64 years who have ever been tested for HIV, by year. The proportion reporting testing did not change significantly between 2001 and 2004.

| Voar | Total<br>Sample Size | Percent | 95% Confidence Interval |
|------|----------------------|---------|-------------------------|
| Tear | Sample Size          | reicent | 3570 Connuence interval |
| 2001 | 3163                 | 44.8    | 42.8-46.8               |
| 2002 | 3880                 | 44.3    | 42.5-46.1               |
| 2003 | 3826                 | 45.2    | 43.4-47.0               |
| 2004 | 3736                 | 42.5    | 40.7-44.4               |

Table 27-2. Proportion Of NH Adults 50 And Older Ever Tested for HIV, 2001 - 2004 NH BRFSS

Percentages will not add up 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

The NH AIDS Hotline 1-800-752-AIDS.

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### Environmental Exposures

#### 28. Radon

Radon is a naturally occurring radioactive gas that results from the decay of uranium, which can be found in rocks and soil.<sup>48</sup> Radon gas is considered a carcinogen (a cancer causing compound). It can increase the risk of developing lung cancer.<sup>48</sup> Because of this potential to cause disease, the EPA has set recommendations for the amount of radon that is acceptable in indoor air.<sup>48</sup> These radon levels can also be affected when water that contains radon is aerated and radon is released into the air. Radon gas is colorless and odorless, but can be detected with relatively inexpensive tests available from many hardware stores and air quality companies.<sup>48</sup>

In 2004, most NH adults said they had heard of radon, (90.5% (95% CI: 89.3 - 91.6)). Of these, 70.7% (95% CI: 69.2 – 72.3) were able to accurately describe radon as a naturally occurring radioactive gas and 39.4% (95% CI: 37.7 – 41.2) correctly identified lung cancer as the health condition most often associated with radon. (Figure 28-1)

Figure 28-1. Responses Of NH Adults Who Had Heard Of Radon, When Asked What Health Condition Was Associated With Radon, 2004 NH BRFSS



 Table 28-1, Responses Of NH Adults Who Had Heard Of Radon When Asked

 What Condition Is Associated With Radon Exposure, 2004 NH BRFSS

|                         | Sample Size |         | 95% Confidence |
|-------------------------|-------------|---------|----------------|
| Condition               | (N)         | Percent | Interval       |
| Asthma                  | 284         | 7.6     | 6.6-8.6        |
| Heart disease or stroke | 26          | 0.8     | 0.4-1.1        |
| Lung cancer             | 1519        | 39.4    | 37.7-41.2      |
| Breast cancer           | 47          | 1.4     | 0.9-1.8        |
| Emphysema               | 74          | 2.2     | 1.6-2.9        |
| Other                   | 192         | 5.2     | 4.3-6.1        |
| No conditions           | 114         | 2.9     | 2.3-3.5        |
| Do not know             | 1616        | 40.6    | 38.8-42.3      |

Percentages in this table add to 100%. Estimates represent the percentage of respondents who had heard of radon and identifying a health condition they thought was associated with radon exposure.

Residents living in single or multi-family homes with living space below the third floor and with permanent foundations are at highest risk for radon exposure. In 2004, adults who lived in these types of homes and who had heard of radon were asked if their homes had ever been tested for radon. Of these, 43.7% (95% CI: 41.9 - 45.5) responded that their homes had, at some time, been tested. Of those adults whose homes had been tested, 18.6% (95% CI: 16.5 - 20.7) had test results above the recommended minimum level. Only 8.9% (95% CI: 7.3 - 10.4) of these had installed a radon venting system.

Healthy New Hampshire 2010 set a target for increasing the proportion of NH homes tested for radon. The report found that the two chief sources of radon gas in New Hampshire homes were: "Radon gas originating from radon dissolved in a groundwater supply source"; and "migration of radon from soil into basements through cracks or openings in the foundation". <sup>5</sup> It further concluded that, "a combination of air and water testing best identifies the total extent of radon exposure in homes". <sup>5</sup>

Questions used in the BRFSS to measure the proportion of NH adults living in homes that have been tested for radon have changed since the baseline measurement in 1998. At that time, adults who said they had heard of radon

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In 2004, BRFSS respondents were first asked how their home was constructed. Only those living in a home that was a "single or multi-family house or condominium (with living space below the third floor) or a basement, 1st floor or 2nd floor apartment, or manufactured housing with a permanent foundation" were asked about radon testing. Eighty seven percent of NH adults reported living in a home meeting this definition. In 2004, 44% (95% CI: 42–46) of adults living in homes meeting this definition and who had heard of radon reported their residence had been tested for radon.

However, because of the substantial question changes, we cannot compare the 1998 baseline and 2004 results.



HNH2010 Objective: Reduce human exposure to radon by increasing the percentage of homes tested for radon in the air.

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| Target          | 50% |
|-----------------|-----|
| Baseline (1998) | 19% |

#### For more information about radon in New Hampshire, contact:

The NH Department of Environmental Services, Radon Program. At 1-800-852-3345 Ext. 4764 (in NH) or 603-271-4764 www.des.state.nh.us/ARD/EHP/Radon/

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#### 29. Indoor and Outdoor Air Pollution

The CDC Environmental Health Tracking Program notes that "environment plays an important role in human development and health. Researchers have linked exposures to some environmental hazards with specific diseases".<sup>49</sup>

In 2001, the CDC began working with states, including NH, to put systems in place that can measure the burden of disease associated with environmental factors.<sup>49</sup> As a part of this system, questions regarding environmental exposures were asked.

In 2004, NH adults were asked if, in the past 12 months, they experienced an illness or symptoms they thought were caused by something in the air inside a home, office or other building. Examples of such exposures included dust, mold, smoke and chemicals inside the home or office. In 2004, 21.6% responded "yes" to this question (95% CI: 20.2 - 23.0). Figure 29-1 and Table 29-1 examine the percentage of NH adults reporting illness or symptoms associated with indoor air exposures, by demographic characteristics.

- **Gender Differences:** There was no significant difference by gender in the percentage of NH adults reporting illness or symptoms due to indoor air quality.
- Age Differences: Younger adults were significantly more likely to report an illness or symptoms related to indoor air than older adults. (Figure 29-1)
- **Income Differences:** There were no significant differences by income in the percentage of adults reporting illness or symptoms related to something in the indoor air.
- Educational Differences: There were no significant differences by education in the proportion of NH adults reporting illness or symptoms related to something in the indoor air.
Figure 29-1. Percentage Of Adults Who Reported Having, In The Last Twelve Months, An Illness Or Symptoms They Thought Were Related To Something In Indoor Air, By Age, 2004 NH BRFSS



Table 29-1. Proportion Of NH Adults Who Reported Having, In The Last Twelve Months, An Illness Or Symptoms They Thought Were Related To Something In Indoor Air, 2004 NH BRFSS

| Characteristic     | Sample Size<br>(N) | Percent | 95%<br>Confidence<br>Interval |
|--------------------|--------------------|---------|-------------------------------|
| Overall            | 4996               | 21.6    | 20.2 - 23.0                   |
| Gender             |                    |         |                               |
| Male               | 2078               | 20.1    | 18.0 – 22.3                   |
| Female             | 2918               | 23.0    | 21.2 – 24.8                   |
| Age                |                    |         |                               |
| 18-24              | 240                | 27.9    | 21.6 – 34.3                   |
| 25-34              | 621                | 23.8    | 20.1 – 27.5                   |
| 35-44              | 1040               | 24.8    | 21.9 – 27.7                   |
| 45-54              | 1185               | 23.7    | 21.0 – 26.4                   |
| 55-64              | 857                | 18.1    | 15.3 – 20.9                   |
| 65 and older       | 1006               | 10.7    | 8.7 – 12.8                    |
| Education          |                    |         |                               |
| Less Than H.S.     | 344                | 21.9    | 16.0-27.8                     |
| H.S. Or G.E.D.     | 1453               | 21.4    | 18.8-24.1                     |
| Some Post-H.S.     | 1244               | 23.8    | 21.1-26.6                     |
| College graduate   | 1948               | 20.3    | 18.2-22.4                     |
| Household Income   |                    |         |                               |
| Less than \$15,000 | 380                | 25.5    | 20.0-31.1                     |
| \$15,000- 24,999   | 611                | 24.7    | 20.3-29.2                     |
| \$25,000- 34,999   | 496                | 22.3    | 17.4-27.1                     |
| \$35,000- 49,999   | 749                | 22.1    | 18.6-25.5                     |
| \$50,000- 74,999   | 891                | 21.6    | 18.5-24.6                     |
| \$75,000+          | 1249               | 20.6    | 18.0-23.2                     |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

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NH adults were also asked if they experienced illness or symptoms in the previous twelve months due to outdoor exposures such as smog, automobile exhaust or chemicals in the outdoor air. In 2004, 8.5% (95% CI: 7.6 - 9.4) reported they had experienced illness due to something in outdoor air. Table 29-2 and Figure 29-2 represent the proportion of NH adults who reported illness due to something in the outdoor air in 2004.

- **Gender Differences:** There was no significant difference by gender in the percentage of NH adults reporting illness or symptoms related to something in the air outdoors.
- Age Differences: There were no significant differences by age in the percentage of NH adults reporting illness or symptoms related to something in the air outdoors.
- Educational Differences: There were no significant differences by education in the percentage of NH adults reporting illness or symptoms related to something in the air outdoors.
- **Income Differences:** Adults with lower incomes were significantly more likely to report illness or symptoms related to something in the outdoor air than adults with higher incomes. (Figure 29-2)

## Figure 29-2. Proportion of NH Adults Reporting Having, In The Last 12 Months, Illness or Symptoms Related to Outdoor Air, By Income, 2004 NH BRFSS



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| Characteristic     | Sample<br>Size (N) | Percent | 95% Confidence<br>Interval |
|--------------------|--------------------|---------|----------------------------|
| Overall            | 5006               | 8.5     | 7.6 - 9.4                  |
| Gender             |                    |         |                            |
| Male               | 2079               | 7.5     | 6.1 – 8.9                  |
| Female             | 2927               | 9.4     | 8.2 – 10.6                 |
| Age                |                    |         |                            |
| 18-24              | 237                | 6.0     | 2.5 – 9.5                  |
| 25-34              | 623                | 7.3     | 5.1 – 9.6                  |
| 35-44              | 1048               | 8.8     | 6.8 – 10.8                 |
| 45-54              | 1183               | 10.2    | 8.4 – 12.1                 |
| 55-64              | 862                | 8.4     | 6.4 – 10.3                 |
| 65 and older       | 1005               | 8.9     | 6.7 – 10.9                 |
| Education          |                    |         |                            |
| Less Than H.S.     | 339                | 9.6     | 6.0-13.2                   |
| H.S. Or G.E.D.     | 1449               | 7.9     | 6.4-9.5                    |
| Some Post-H.S.     | 1249               | 9.7     | 7.8-11.7                   |
| College Graduate   | 1962               | 7.9     | 6.6-9.3                    |
| Household Income   |                    |         |                            |
| Less Than \$15,000 | 386                | 15.4    | 11.3-19.5                  |
| \$15,000- 24,999   | 604                | 13.6    | 10.1-17.1                  |
| \$25,000- 34,999   | 499                | 8.5     | 5.8-11.2                   |
| \$35,000- 49,999   | 756                | 8.1     | 5.8-10.4                   |
| \$50,000- 74,999   | 899                | 7.2     | 5.2-9.2                    |
| \$75,000+          | 1249               | 6.5     | 5.0-8.0                    |

| Table 29-2. | . Proportion C  | Of NH Adults | Who Rep     | orted Having | g, In The I | Last Twelve |
|-------------|-----------------|--------------|-------------|--------------|-------------|-------------|
| Months, A   | n Illness Or Sy | ymptoms Re   | elated To C | Outdoor Air, | 2004 NH     | BRFSS       |

Percentages will not add up to 100% because each estimate represents the percentage of respondents within each demographic subgroup.

For More Information on the Environmental Public Health Tracking Program, contact:

1-800-852-3345 Ext. 4988 (in NH) or 603-271-4988

http://www.des.state.nh.us/EHTP/

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## 30. Childhood Lead

CDC reports that lead exposure can lead to intellectual and behavioral deficits in children and hypertension and kidney disease in adults. <sup>50</sup> The proportion of children with elevated blood lead levels has declined since the mid-1970s. However, CDC estimates that nationally, 310,000 children aged one to five years are at risk of exposure to harmful lead levels.<sup>50</sup>

Housing with aging and exposed lead paint is the most important source of lead exposure. However, water pipes in some older homes may contain lead solder. In these cases, lead can leach out into the water.<sup>51</sup> Working in a job where lead is used or engaging in certain hobbies in which lead is used, such as stained glass can also be a source of lead exposure as well as using health-care products or folk remedies that contain lead.<sup>51</sup> Lead can also be found in some batteries, ammunition, metal products (solder and pipes), and devices used to shield X-rays.<sup>51</sup>

The NH Lead Program recommends that all children at high-risk for lead poisoning be screened for lead at one and two years of age, and that children not previously tested be screened between 36 and 72 months. Children are at increased risk if they are at lower incomes, if they live in a house constructed before 1950 or in a house constructed before 1970 with recent renovations or if a sibling or playmate has had lead poisoning.<sup>52</sup>

The NH BRFSS asked NH adults about lead exposure in their households. In 2003, 5.7% (95% CI: 4.9-6.5) of NH adults reported living in a home that had lead paint. However, 24.3% (95% CI: 22.9-25.8) reported that their home had been built prior to 1950. In addition, the 2000 Census found that 37% of homes in NH were built before 1950<sup>53</sup>, suggesting that many NH adults may be underestimating their risk of exposure to lead in their home environment and may be underestimating the age of their dwelling.

Among adults reporting having one or more children under age six in their household, 5.1% (95% CI: 3.4-6.8) reported there was lead paint in their residence. Among adults reporting one or more children under age six in their household, 22.5% (95% CI: 18.6-26.3) lived in structures built before 1950. (Table 30-1)

| Table 30-1. Proportion of NH Adults Reporting Various Risk Factors As | sociated |
|---|----------|
| With Lead Exposure, 2003 NH BRFSS                                     |          |

|                                   | Sample Size |         | 95% Confidence |
|-----------------------------------|-------------|---------|----------------|
|                                   | (N)         | Percent | Interval       |
| Reported home has lead paint      | 4278        | 5.7     | 4.9-6.5        |
| Reported home built before 1950   | 4222        | 24.3    | 22.9-25.8      |
| Children under six and home built | 4215        | 22.5    | 18.6-26.3      |
| prior to 1950                     |             |         |                |

Percentages in this table add to 100%. Each estimate represents the percentage of respondents answering the question regarding living in a home with lead paint.

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For more information about the New Hampshire Childhood Lead Poisoning Prevention Program, contact: CLPPP, NH DHHS 29 Hazen Drive Concord, NH 03301 1-800-852-3345 Ext. 4507 (in NH) or 603-271-4507

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