

Healthy New Hampshire 2010

2008 Update and Summary

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EXECUTIVE SUMMARY

Healthy New Hampshire 2010 was published in 2001 by the New Hampshire Department of Health and Human Services in order to establish baselines and set goals for health indicators in the state. Eleven broad public health focus areas related to disease prevention and health promotion were chosen by the authors of the original report based on impact and amenability to intervention. These focus areas are as follows:

1. Access to Quality Health Services
2. Alcohol, Tobacco, and Other Drugs
3. Cancer and Chronic Conditions
4. Environmental Health
5. Heart Disease, Stroke, and Diabetes
6. Immunization and Infectious Diseases
7. Injury and Violence Prevention
8. Maternal, Infant, and Child Health
9. Mental Health
10. Nutrition and Physical Activity
11. Reproductive and Sexual Health

Within each focus area, several objectives were chosen to guide interventions and policy development to improve the overall health of New Hampshire's residents.

Though results were mixed in all focus areas, targets for most objectives have been successfully surpassed, met, or approached in the categories: Alcohol, Tobacco, and Other Drugs; Cancer and Chronic Conditions; Environmental Health; Immunization and Infectious Diseases; and Reproductive and Sexual Health. Results were mixed for three focus areas: Injury and Violence Prevention, Mental Health, and Nutrition and Physical Activity. Health indicators have predominantly declined in the focus areas Access to Quality Health Services and Maternal, Infant, and Child Health. Changes in New Hampshire's data tended to follow national trends, though New Hampshire generally outperforms the national average on indicators of health.

This report discusses the eleven focus areas of *Healthy New Hampshire 2010* in more detail, comparing baseline data to the most currently available updated information for each objective. This report also provides potential explanations for the observed changes.

1. ACCESS TO QUALITY HEALTH SERVICES

1.1 Introduction

This section assesses New Hampshire's progress in achieving the objectives for improving access to quality health services by comparing recent data to original state and national baselines presented in the original 2001 edition of *Healthy New Hampshire 2010*. This focus area is broken down into two components: access to primary health services and access to oral health services. Though access to primary health services seems to have decreased since the baseline, access to oral health services seems to have improved slightly. Overall, indicators in this focus area moved in a negative direction from 2010 targets.

- The percentage of persons age 65 and under who have a usual source of health care and health insurance decreased rather than increased toward 2010 targets.
- Progress toward expanding public health indicators to address racial and ethnic minority health needs is unclear, but not promising based on anecdotal evidence. This objective is developmental, with no baseline data, no set target, and no clear measurement for achievement.
- Oral health gains have been slow but positive. While increasing toward 2010 targets, New Hampshire remains far below the national average in public fluoridated water supplies, though above the national average in decay-preventing dental sealants in children.

1.2 Primary Health Services

1.2.1 Objective: Increase the percentage of persons age 65 and under who have a usual source of health care.

Access to a regular source of health care can help maintain health for all individuals and prevent comorbidities, complications, and disease progression for those with chronic illness. At baseline measurement in 2001, an estimated 93 percent of New Hampshire residents under the age of 65 had a regular source of health care, compared to the national average of 86 percent. A goal of 96 percent was set for 2010.¹ However, New Hampshire has not only fallen short of its target, but decreased by five percent since 2001, approaching the unchanged national average.² While the percentage of residents with a regular source of health care has decreased, the number of primary care providers in the state has increased. According to the "New Hampshire Rural Health Report, 2004," there was a net increase of 14.5 percent in doctors providing primary health care in the state between 1998 and 2004.³ One possible explanation for this discrepancy is that doctors are increasingly clustered in urban and semi-urban areas of the state, leaving those in rural areas with fewer doctors.⁴

Table 1. Percentage of persons (65 and under) with a personal healthcare provider.

	1999	2004	NH Target 2010
NH	93	87	96
US	86 (1998)	86 (2006)	

Source: *Healthy New Hampshire 2010*;⁵ *State Health Access Data Assistance Center*; ⁶ *BRFSS 2005*; ⁷ *2006 National Health Interview Survey*; ⁸ *Healthy People 2010*⁹

1.2.2 Objective: Increase the percentage of persons age 65 and under who have health insurance.

While health insurance does not guarantee access to health care, it can serve as an indicator of access. In 2004, only nine percent of the insured in the state lacked a regular health care provider, compared to 47 percent of the uninsured.¹⁰ This suggests that increasing the percentage of individuals with health insurance may help New Hampshire increase the percentage of individuals who have a usual source of health care.

Progress has not been made in this objective, with rates of insurance falling slightly. New Hampshire citizens' health coverage still remains significantly above the national average, which has also fallen during this time period. According to the baseline statistics in *Healthy New Hampshire 2010*, 91 percent of New Hampshire residents had health insurance, compared to 86 percent nationwide.¹¹ Since 1999, this percentage has dropped slightly to approximately 90 percent.¹²

Table 2. Percentage of persons (65 and under) who have health insurance.

	1999	2005	NH Target 2010
NH	91	90	100
US	86 (1998)	83 (2006)	

Source: *Healthy New Hampshire 2010*;¹³ *BRFSS 2005*;¹⁴ *2006 National Health Interview Survey*¹⁵

1.2.3 Objective: Increase public health capacity to measure health care access and health status indicators in racial and ethnic minority populations.

Racial and ethnic minorities made up approximately 3.5 percent of New Hampshire's population in 2001.¹⁶ *Healthy New Hampshire 2010* acknowledged the need for the development of reliable indicators in order to measure access to health care for racial and ethnic minorities. These indicators would also help guide the creation of culturally relative and sensitive health care interventions.

As this is a developmental benchmark, no state baselines or goals have been set. This is an area that warrants further study. However, New Hampshire has made strides toward establishing organizations and conducting research to meet this objective. As a result of findings in the national *Healthy People 2010*, the Centers for Disease Control and

Prevention (CDC) launched the Racial and Ethnic Approaches to Community Health (REACH) 2010 program in an effort to eliminate racial health disparities by 2010. In 2000, the CDC awarded the New Hampshire Minority Health Coalition with a grant to found the NH REACH program.¹⁷ NH REACH's *Data Report on the Health of African Descendents and Latinos in Hillsborough County, New Hampshire, 2004*, estimated that 62 percent of African Descendents and 38 percent of Latinos reported having health insurance. The report also identified weight, weight control, and diabetes as health status indicators that demonstrate disparities between minorities and Non-Hispanic whites.¹⁸ The establishment of NH REACH and this organization's production of this 2004 research represent progress toward achieving the objective outlined in *Healthy New Hampshire 2010*.

Table 3. Developing tools to measure health care access in minority populations.

	Baseline	Current	NH Target 2010
NH	NA	NA	Developmental
US	10% of the National Healthy People 2010 objectives contain population specific baselines.	NA	

Source: *Healthy New Hampshire 2010*¹⁹

1.3 Oral Health Services

1.3.1 Objective: Increase the percentage of third grade children with dental sealants on their teeth.

Tooth decay is the most common chronic disease of childhood.²⁰ *Healthy New Hampshire 2010* therefore emphasized the need to increase the percentage of third grade children with dental sealants on their teeth, which help prevent tooth decay and other chronic oral health conditions. The report did not provide baseline data for this objective, nor a target for the state. However, some current estimates are available. In 2001, an oral health survey was conducted for third grade students in New Hampshire public schools, with results indicating that 46% of the state's third graders had dental sealant.²¹ A study conducted in the 2002-2003 school year estimated that 39% of third graders had dental sealants.²² Although the percentage of third grade children with dental sealants has decreased since 2001, it is still above the national average of 23 percent,²³ and approaches the *Healthy People 2010* target of 50 percent.²⁴

Table 4. Percentage of third grade children with dental sealants on their teeth.

	1998	2003	NH Target 2010
NH	NA	39	Developmental
US	23	31 (2002)	

Source: *Healthy New Hampshire 2010*; ²⁵ *NH Oral Health Issue Brief*; ²⁶ *National Center for Health Statistics Health Promotion Statistics* ²⁷

1.3.2 Objective: Increase the percentage of New Hampshire residents served by a fluoridated public water supply.

Providing a fluoridated water supply is a minimally invasive public health intervention to improve population oral health. The consumption of fluoridated water acts as a preventative measure that reduces tooth decay.²⁸ *Healthy New Hampshire 2010* reported that 38 percent of New Hampshire residents were served by a fluoridated water supply in 2000, with a goal of 65 percent service set for 2010.²⁹ As of 2005, according to the Centers for Disease Control and Prevention and the Association of State and Territorial Dental Directors, 42.7 percent of New Hampshire residents receive water from a fluoridated supply.³⁰ While the percentage of residents served by a fluoridated public water supply has increased by 5 percent between 2000 and 2002, New Hampshire still has a low rate of fluoridation compared to the national average of 62 percent, last reported in 1992.³¹

Table 5. Percentage of NH residents served by fluoridated public water supply.

	2000	2002	NH Target 2010
NH	38	43	65
US	62 (1992)	67	

Source: *Healthy New Hampshire 2010*; ³² *New Hampshire Water Fluoridation Indicators-Annual Report Data (2002)* ³³

2. ALCOHOL, TOBACCO, AND OTHER DRUGS

2.1 Introduction

This section provides an interim update on New Hampshire’s progress toward its 2010 targets on alcohol, tobacco, and other drugs, compares state trends to national trends, and proposes explanations for the trends. This focus area was broken down by its three components, with targeted objectives set for each. Between 1999 and 2005, the objectives and goals set forth in *Healthy New Hampshire 2010* within this focus area have witnessed marked progress in several quantifiable categories.

- Targets for diminishing youth alcohol consumption were met.

- No progress has been made in decreasing alcohol related deaths on New Hampshire roads.
- Targets for decreasing youth tobacco usage were surpassed by 2005.
- Targets for decreased marijuana use have not yet been met, but advancement toward the set objectives has been made.
- Availability of and access to treatment for adolescent alcohol use, adult alcohol and drug use, and adult tobacco use is a developmental objective, and limited information is available to determine progress.
- Progress toward increased parental monitoring of adolescent alcohol and tobacco use is unclear.

The most concrete finding may, in fact, be that the general trends found in New Hampshire’s statistical movements in the given categories regarding substance abuse strongly parallel the trends nationwide.

2.2 Alcohol

2.2.1 Objective: Increase the percentage of youth who report never using alcohol.

Healthy New Hampshire 2010 set a goal of 27 percent of youth reporting never using alcohol, up from a baseline state percentage of 10 percent and a national percentage of 19 percent.³⁴ Alcohol consumption by New Hampshire teens decreased notably between 1999 and 2005, and the goal was essentially met with a 2005 estimate of 26.6 percent reporting never using. While New Hampshire slightly outpaced nationwide progress in the category of youth alcohol consumption, it remained within a general trend of improvement seen throughout the United States. Of 29 regions across the country surveyed by the CDC, 21 regions saw the percentage of youth who reported never using alcohol decrease, while seven remained unchanged and only one (Chicago) increased.³⁵

In order to move beyond the target set in *Healthy New Hampshire 2010*, it may be helpful to re-examine the state’s substance abuse treatment options. The Substance Abuse and Treatment block grant has been the “bedrock of prevention funding” in New Hampshire.³⁶ However, congressional support for this grant has faded in recent years.³⁷ Thus, New Hampshire may have to either find another way to channel financial support from the federal government into a comprehensive prevention program or find funding from an alternative resource.

Table 6. Percentage of youth who report never using alcohol.

	1999	2005	NH Target 2010
NH	17	26.6	27
US	19	25.7	

Source: *Healthy New Hampshire 2010*;³⁸ *NH Youth Risk Behavior Survey*;³⁹ *Youth Risk Behavior Survey, CDC*⁴⁰

2.2.2 Objective: Reduce the percentage of youth who report having used alcohol in the past 30 days.

The baseline percentage of youth reporting having used alcohol in the past 30 days was 53 percent in 1999, higher than the national average of 50 percent, and the *Healthy New Hampshire 2010* target was set at 43 percent.⁴¹ Recent data show that this objective was almost met, with 44 percent of youth reporting having used alcohol in the past 30 days in a 2005 estimate,⁴² consistent with the current national rate.⁴³ Having started at a higher baseline, however, youth alcohol consumption in the state decreased at a greater rate than national trends. One possible explanation for the decrease may be the success of the Alcohol Abuse Treatment Fund,⁴⁴ which disburses funds for local alcohol prevention and treatment programs. However, further research on the effect of the program is required before a definitive connection can be drawn.

Table 7. Percentage of youth who report having used alcohol in the past 30 days.

	1999	2005	NH Target 2010
NH	53	44	43
US	50	43.3	

Source: Healthy New Hampshire 2010;⁴⁵ NH Youth Risk Behavior Survey;⁴⁶ Youth Risk Behavior Survey, CDC⁴⁷

2.2.3 Objective: Reduce the number of alcohol related deaths on New Hampshire roads.

The rate of alcohol related deaths on New Hampshire roads increased marginally between 1997 and 2005, and the greatest increase in alcohol-related crashes with injuries occur in the 16-25 age group category.⁴⁸ However, the total number of alcohol related deaths has varied throughout the past decade. From 1997 to 2002, alcohol related deaths on New Hampshire roads were 47, 41, 52, 41, 57, 46, respectively.⁴⁹ While the raw number of alcohol related deaths may be higher in 2005 than it was in 1997, the 53 deaths in 2005 make up a smaller percentage of total traffic related deaths for the year (53 out of 166 total, or 31.9 percent) when compared to the 47 deaths in 1997 (47 out of 125 total, or 37.6 percent).⁵⁰ Thus, the percentage of total car deaths which are alcohol related has decreased from 1997 to 2005.

Nevertheless, alcohol related deaths on New Hampshire roads remains the only statistical category in this report which has moved away from its 2010 target. It would be helpful for *Healthy New Hampshire 2010* to decide whether a crude rate per resident population or a raw number is the best measure of progress for this category. Despite this discrepancy in presentation, there has been no progress toward achieving a goal of 24 deaths/year or 1.8 deaths/100,000 resident population.⁵¹

One step the state has taken in the direction of improvement can be seen in the joint task force convened in 2006 by the New Hampshire Department of Health and Human Services, the New Hampshire Governor’s Commission on Alcohol and Drug Abuse

Prevention, Intervention, and Treatment, Dartmouth Medical School, and the Alcohol and Drugs Service Providers' Association.⁵² This task force looks to provide first-step solutions for a diverse array of New Hampshire citizens regarding the "misuse of alcohol and other drugs."⁵³ This task force is a worthy creation, but it is clear that more than a state-sponsored task force will be required for significant change in alcohol abuse among New Hampshire's citizens.

Table 8. Number of alcohol related deaths on New Hampshire roads (per 100,000 population).

	1997	2005	NH Target 2010
NH	4.0	4.1	1.8
US	6.1	5.6	

Source: *Healthy New Hampshire 2010*;⁵⁴ *New Hampshire Highway Safety Agency*;⁵⁵ *Impaired Driving Facts 2005, NHTSA*⁵⁶

2.3 Tobacco

2.3.1 Objective: Increase the percentage of youth who report never using tobacco.

New Hampshire has made significant progress toward its 2010 targets with tobacco statistics. The percentage of youth who reported never using tobacco has increased by 21 percent since the baseline measurement,⁵⁷ exceeding the 2010 target and outpacing the national trend in tobacco abstinence.

Table 9. Percentage of youth who report never having used tobacco.

	1999	2005	NH Target 2010
NH	33	53.8	43
US	30	45.7	

Source: *Healthy New Hampshire 2010*;⁵⁸ *NH Youth Risk Behavior Survey*;⁵⁹ *Youth Risk Behavior Survey, CDC*⁶⁰

2.3.2 Objective: Reduce the percentage of youth who report having used tobacco in the past 30 days.

Similarly, the percentage of youth who reported having used tobacco in the past 30 days went from 34 percent in 1999 to 20.5 percent in 2005.⁶¹ This decrease met both the 2010 target and exceeded the corresponding decrease in current national youth tobacco consumption. It may be difficult to pinpoint specific factors in New Hampshire, rather than simply national trends and events, which contributed to such improvements. One local possibility is the Tobacco Use Prevention Fund, established in 2001. This statute mandates that \$3 million annually be deposited in the TUP Fund--funding that is subsequently used for tobacco use prevention community programs, school programs, cessation programs, and administration and enforcement.⁶²

On a national scale, widespread anti-smoking media campaigns, such as that of TheTruth.com, have become a mainstay of the mainstream. In 1999, TheTruth.com

developed what would become a wildly popular advertising campaign targeted to 12-17 year olds.⁶³ According to a study published in *American Health Magazine*, “22 percent of the overall decline in youth smoking [between 2000 and 2002] is attributable directly to the ‘truth’ campaign.”⁶⁴

One possible route to further reduce youth tobacco use may be to raise the state tax on cigarettes. The current \$0.80 cigarette tax in New Hampshire is the lowest of any Northeastern state.⁶⁵ Funds from an incremental cigarette tax increase could be used to finance anti-smoking programs across the state.

Table 10. Percentage of youth who report having used tobacco in the past 30 Days.

	1999	2005	NH Target 2010
NH	34	20.5	24
US	35	23	

Source: *Healthy New Hampshire 2010*;⁶⁶ *NH Youth Risk Behavior Survey*;⁶⁷ *Youth Risk Behavior Survey, CDC*⁶⁸

2.4 Other Drugs

2.4.1 Objective: Increase the percentage of youth who report never using marijuana.

New Hampshire has not made substantial progress in reducing the use of marijuana among the state’s youth. While the percentage of youth refraining from marijuana use has increased from 50 percent at baseline⁶⁹ to 55.6 percent in 2005,⁷⁰ it has not followed the faster pace of national trends. The *Healthy New Hampshire 2010* goal was set at 60 percent,⁷¹ and the national percentage is currently 61.6 percent.⁷²

Table 11. Percentage of youth who report never using marijuana.

	1999	2005	NH Target 2010
NH	50	55.6	60
US	53	61.6	

Source: *Healthy New Hampshire 2010*;⁷³ *NH Youth Risk Behavior Survey*;⁷⁴ *Youth Risk Behavior Survey, CDC*⁷⁵

2.4.2 Objective: Reduce the percentage of youth who report having used marijuana in the past 30 days.

In 2005, twenty-six percent of New Hampshire youth reported having used marijuana in the last 30 days.⁷⁶ This is down from thirty percent in 1999,⁷⁷ but higher than the national average of approximately twenty percent.⁷⁸ In response to concern over the prevalence of marijuana use and its implications for harder drug use, state legislators passed the Model Drug Dealer Liability Act in 2005, which provides communities with a civil remedy to drug problems.⁷⁹ Current information on youth marijuana use is required to determine if the Act has had any effect on marijuana use.

Nationwide, marijuana arrests in 2006 hit a record high, eclipsing the previous record set the previous year by six percent.⁸⁰ There were 829,625 marijuana related arrests made in the United States in 2006.⁸¹ This fact could potentially demonstrate either a positive or negative correlation with the improvements seen on a national level, and even on the micro-level in New Hampshire. It is conceivable that law enforcement practices regarding drug use have stiffened to such a degree that there has been a resulting deterrence against marijuana usage among youth. Increased arrests may, however, instead be a result of increased usage nationwide. Nevertheless, a comparative report compiled by the CDC, which surveyed lifetime marijuana usage among teens in 31 different regions across the country during both 1999 and 2005, shows that usage had decreased in 18 of these areas, while the remaining 13 showed no change.⁸² These data would point to a greater likelihood of a correlation between increased arrests and increased deterrence.

Finally, usage statistics among teens nationwide of drugs such as cocaine, heroin, methamphetamines, and steroids between 1999 and 2005 have remained unchanged in more than 80 percent of the 31 regions studied by the CDC.⁸³ These same statistics have also remained fundamentally unchanged in New Hampshire between 2003 and 2005.⁸⁴ Therefore, the measured decrease in marijuana usage should not be taken as indicative of a larger trend of progress in the realm of substance abuse.

Table 12. Percentage of youth who report having used marijuana in the past 30 days.

	1999	2005	NH Target 2010
NH	30	25.9	20
US	27	20.2	

Source: Healthy New Hampshire 2010;⁸⁵ NH Youth Risk Behavior Survey;⁸⁶ Youth Risk Behavior Survey, CDC⁸⁷

2.5 Treatment

2.5.1 Objective: Increase availability of and access to treatment for adolescent alcohol use, adult alcohol and drug use, and adult tobacco use.

Healthy New Hampshire 2010 did not clearly quantify any specific indicators designed to measure access to treatment for alcohol, tobacco, or drug use. Thus, it is very difficult to assess the progress New Hampshire has made since 1999. Any successful state plan to address alcohol, tobacco, or drug use must incorporate a variety of treatment options to ensure that all citizens have proper access. New Hampshire spends \$2.8 million in drug prevention programs and \$7.6 million in drug treatment programs per year.⁸⁸ Since the federal government began to decrease funding for Federal Substance Abuse Prevention and Treatment Block Grants program, New Hampshire has had to consider a variety of creative solutions to sustain effective treatment programs.⁸⁹ New Hampshire has also closed fifteen treatment facilities in the past twenty years, creating a severe lack of access in many areas around the state.⁹⁰

Table 13. Availability of and access to treatment for adolescent alcohol use and drug use, and adult tobacco use.

	Baseline	Current	NH Target 2010
NH	NA	NA	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*⁹¹

2.5.2 Objective: Increase parental monitoring of youth alcohol and tobacco use.

Recent data measuring general parental monitoring of youth alcohol and tobacco use in New Hampshire were not found. Currently, the objective is largely undefined, making it difficult to accomplish any calculable progress.

It should be noted that the New Hampshire baseline number cited in the *Healthy New Hampshire 2010* report, which purportedly comes from the 1998-99 University of New Hampshire Teen Assessment Project (TAP) does not, in fact, represent any known percentage provided by the project. The report does not clearly define what is meant by “high monitoring” or “low monitoring,” nor does it give a total percentage of parents who monitor their children other than to say that “about three quarters” of teens surveyed “reported close monitoring by their parents.”⁹² Therefore it may be more productive to comparatively examine the percentage of youth who drink alcohol or smoke tobacco with “low” versus “high” parental monitoring. In the TAP, it was reported that 51 percent of youth with low parental monitoring drink alcohol at least monthly, while only ten percent of youth with high parental monitoring drink alcohol at least monthly.⁹³ The numbers for 2000-01 show slight increases in alcohol consumption despite parental monitoring. Fifty-five percent of youth with low monitoring drink alcohol, while 17 percent of youth with high monitoring drink alcohol.⁹⁴

With regards to tobacco usage, the TAP demonstrated that 36 percent of teens with low parental monitoring smoked tobacco at least monthly, while eight percent of youth with high parental monitoring smoked tobacco at least monthly.⁹⁵ For 2000-01, the numbers remained stagnant, as approximately 37 percent of youth with low monitoring smoked tobacco at least monthly and approximately nine percent of youth with high monitoring smoked tobacco at least monthly.⁹⁶ Statewide data collection for this survey question concerning parental monitoring has not continued since 2001, and the marginal variance between the comparative numbers from 1998-99 and 2000-2001 is not surprising considering the minimal time span.

Table 14. Percentage of reported parental monitoring of youth alcohol and tobacco use.

	1999	Current	NH Target 2010
NH	70	NA	80
US	NA	NA	

Source: *Healthy New Hampshire 2010*⁹⁷

3. CANCER AND CHRONIC CONDITIONS

3.1 Introduction

This section assesses New Hampshire's progress in reducing the toll of cancer and chronic conditions. Despite a reduction in the death rate of breast and colorectal cancer, cancer remains the second leading cause of death among New Hampshire residents.⁹⁸ Less progress was seen in the focus area component of chronic conditions.

- The target for reduction of breast and colorectal cancer deaths was met by 2005.
- Limited availability of both baseline data and current measurements impede the assessment of the progress in the receipt of treatment for arthritis.
- Little change was seen in measured activity levels due to neck or back pain.
- Pediatric hospitalizations due to asthma were reduced, though not at the pace necessary to meet 2010 targets.

Although there is variation between the categories, on average New Hampshire has made visible strides toward reaching the objectives of *Healthy New Hampshire 2010*. Both public and private initiatives furthered efforts in prevention, early detection, and treatment. However, there is always room for improvement. New Hampshire should continue to support and assess its cancer and chronic conditions education, detection and treatment programs to ensure its citizens receive the best possible care.

3.2 Cancer

3.2.1 Objective: Reduce breast cancer deaths.

Healthy New Hampshire 2010 established a baseline of 28.9 breast cancer deaths per 100,000 population, and set a target to reduce that number to 26 such deaths by 2010.⁹⁹ By 2002, the rate of breast cancer deaths in the state had already dropped to 23.8, successfully surpassing the target.¹⁰⁰ This number has remained stable since 2002. The most recent available data report a breast cancer death rate of 23.5 in 2004.¹⁰¹

In keeping with the objectives of the report, private organizations worked to increase awareness and education about breast cancer. For example, in 2006 the New Hampshire Breast Cancer Coalition released a revised edition of their comprehensive resource guide for victims, friends and families coping with the many challenges of cancer.¹⁰² In an effort to expand available resources, this edition included new chapters on helpful websites. Furthermore, the 2006 version of the report addressed disparities in health status by including new chapters directed toward low-income and uninsured citizens.¹⁰³

Table 15. Breast cancer deaths (per 100,000 population).

	1999	2005	NH Target 2010
NH	28.9	23.5	26.0
US	28.6	NA	

Source: *Healthy New Hampshire 2010*;¹⁰⁴ *The Henry J. Kaiser Family Foundation*¹⁰⁵

3.2.2 Objective: Reduce colorectal cancer deaths.

Likewise, *Healthy New Hampshire 2010* established a baseline of 23.3 colorectal cancer deaths per 100,000 population, and set a target to reduce that number to 21 such deaths by 2010.¹⁰⁶ By 2002, the colorectal cancer death rate had dropped to 17.9.¹⁰⁷ As with the breast cancer death rate, this improvement appears stable: a study of the rate of colorectal cancer death between 1999 and 2003 calculated an average mortality rate of 21.3 deaths per 100,000 population.¹⁰⁸

Table 16. Reduce colorectal cancer deaths (per 100,000 population).

	1999	2003	NH Target 2010
NH	23.3	17.9	21.0
US	NA	NA	

Source: *Healthy New Hampshire 2010*;¹⁰⁹ *New Hampshire Cancer Report 1999-2003*¹¹⁰

3.3 Musculoskeletal Conditions

Healthy New Hampshire 2010 aimed to limit the debilitating impact of arthritis and neck and back pain. However, the limited availability of both baseline data and updated research impede the assessment of the progress in these areas.

3.3.1 Objective: Increase the percentage of adults with arthritis who are receiving treatment.

Healthy New Hampshire 2010 set a target to increase the percentage of adults with arthritis who are receiving treatment. While there are no data relating directly to treatment, the available data do show that the number of adults with arthritis who felt limited by their disease decreased by 3.5 percent between 2003 and 2005.¹¹¹ It may be worthwhile to investigate whether increased treatment coverage is responsible for the improvement.

Table 17. Increase the percentage of adults with arthritis who are receiving treatment.

	Baseline	Current	NH Target 2010
NH	NA	NA	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*¹¹²

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

Healthy New Hampshire 2010 established a goal to decrease the number of adults experiencing activity limitations due to neck or back pain from the baseline of 3.2 percent to 2.0 percent.¹¹³ The most recent available data report a drop from 3.2 percent to 3.08 percent in 2000.¹¹⁴ While this is a move in the right direction, improvement at this rate will not meet the state’s objective by 2010.

Table 18. Reduce the percentage of adults who experience activity limitations due to back or neck problems.

	1999	2005	NH Target 2010
NH	3.2	3.08	2.0
US	3.2	NA	

Source: *Healthy New Hampshire 2010*;¹¹⁵ BRFSS 2000¹¹⁶

3.4 Respiratory conditions

3.4.1 Reduce hospitalizations for pediatric asthma.

Healthy New Hampshire 2010 set a target to reduce pediatric hospitalizations due to asthma from a baseline of 10.5 to 7.9 per 100,000 population. Progress on this objective appears mixed. The 2004 pediatric hospitalization rate was 9.3.¹¹⁷ At this rate, the number of hospitalizations will be 8.1 by 2010, just missing the target. Moreover, the New Hampshire Department of Health and Human services reported that the rate of hospitalizations actually increased between 2001 and 2004,¹¹⁸ which suggests a more rigorous effort may be necessary if New Hampshire is to meet this goal.

Table 19. Reduce hospitalizations for pediatric asthma (per 10,000 population age 0 through 17 years).

	1999	2004	NH Target 2010
NH	10.5	9.3	7.9
US	23.0	NA	

Source: *Healthy New Hampshire 2010*;¹¹⁹ *Asthma in New Hampshire, 1990-2004*¹²⁰

4. ENVIRONMENTAL HEALTH

4.1 Introduction

As a framework for disease prevention and healthy living, *Healthy New Hampshire 2010* proposed a set of environmental health objects for the improvement of public health and reduction of risk associated with environmental hazards. The report addressed three specific environmental issues—Arsenic, Radon, and Air Quality—and, in particular, highlights the issue of public consciousness and testing matters in these areas.

New Hampshire has shown gains in most of the report's environmental health objectives:

- Public Water Systems are close to reaching 100 percent compliance with EPA standards for arsenic and radon levels.
- Many more homes are being tested for radon, approaching 2010 targets.
- Fewer tested children have elevated blood lead levels, surpassing 2010 targets.
- More homes are being constructed for energy efficiency.
- More employed adults work in smoke-free workplaces.
- Fewer emissions exceed EPA standards.

However:

- The percentage of public water systems in compliance with EPA standards has not changed noticeably.
- No state-wide system has been established to test private wells for arsenic and radon, and little data exist on how many have already been tested.

Overall, New Hampshire is on track to meet most of the environmental health targets set for 2010, but better water-quality testing of private wells and more frequent testing of public water systems for radon are needed to meet all objectives in this focus area.

4.2 Arsenic

Arsenic is a colorless, odorless, and tasteless compound that is found naturally in the bedrock of New Hampshire. Studies have shown that continual exposure to arsenic is associated with increased risks of lung and bladder cancer.¹²¹ The federal Maximum Contaminant Level (MCL) of Arsenic in drinking water systems as mandated by the EPA is 0.01 mg/L.¹²²

4.2.1 Objective: Reduce human exposure to arsenic by increasing the percentage of public water systems that are in compliance with the new EPA Maximum Containment Level (MCL) for arsenic.

The proposed future MCL at the time of *Healthy New Hampshire 2010*'s development was 0.005 mg/L,¹²³ and this level was the basis of the baseline measurement and the target for 2010.¹²⁴ Here it is assumed that the authors would have intended the level to be the MCL that was soon after set as a federal standard, 0.01mg/L.¹²⁵ Although the number of Community Water Systems in compliance with the new MCL has risen since 1999,¹²⁶ the new MCL was not officially mandated until 2006.¹²⁷ There was, therefore, a large increase in the total number of violations in 2007, from 18 in 2006 to 66 in 2007, due to the implementation of the new rule.¹²⁸ At baseline in 1999, 80 percent of systems were in compliance with the new MCL.¹²⁹ In 2007, compliance was estimated at 94 percent.¹³⁰ New Hampshire is on track to reach the 100 percent attainment target by 2010, assisted by the fact that the new MCL is now law.

Table 20. Percentage of public water systems in compliance with EPA Arsenic MCL (0.01 mg/L).

	1999	2007	NH Target 2010
NH	80	94	100
US	NA	NA	

Source: *Healthy New Hampshire 2010*; ¹³¹EPA Safe Drinking Water Information System¹³²

4.2.2 Objective: Increase the percentage of private wells tested for arsenic.

Unlike public water supplies, private wells in New Hampshire are not subject to stringent testing regulations and do not undergo regular testing.¹³³ Though testing is not required statewide, a few towns do require the testing of new wells for water quality. Arsenic is sometimes, though not always, included in these required tests.¹³⁴ No baseline for New Hampshire or the United States exists, as no study has been done to ascertain how many private well users have tested their wells for arsenic. Though unreliable as a statewide statistic, a U.S. Geological Survey of Southeastern New Hampshire in 2003 found that “of 90 percent of well owners who reported that they used the water from their bedrock well for drinking, less than 14 percent had tested for arsenic prior to this study.”¹³⁵

No official target was set in *Healthy New Hampshire 2010*, but a recommendation of testing 50 percent of existing wells and 100 percent of new wells was appended.¹³⁶ One study has showed that approximately 13 percent of domestic well users had arsenic concentrations above the new MCL.¹³⁷ Analysis of wells that have been tested for arsenic show that southeast and south central New Hampshire are the most susceptible to elevated arsenic concentrations.¹³⁸ Therefore, should a large number of tests be done, they should initially start in southeast and south central New Hampshire.

Table 21. Percentage of private wells tested for arsenic.

	Baseline	Current	NH Target 2010
NH	NA	NA	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*¹³⁹

4.3 Radon

Radon is a radioactive gas that is caused by the decay of radium. Radon can be found in the natural environment of New Hampshire, where it dissolves into the groundwater or is released into the air. High levels of radon exposure can increase the risks of lung cancer.¹⁴⁰ The EPA currently stipulates a two-tiered acceptable radon range of MCL 300pCi/L – AMCL (Alternative Maximum Contaminant Level) 4000pCi/L.

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

Current data show a large rise in the number of homes that have been tested for radon, fast approaching the 2010 target. However, due to changes in the way the data were gathered, the numbers from 1998 and 2004 are not directly comparable. In 2004, only those people who lived in a “single or multi-family house or condominium (with living space below the third floor) or a basement, first floor or second floor apartment, or manufactured housing with a permanent foundation” were surveyed.¹⁴¹ Only 87 percent of New Hampshire adults reported that they met this criteria. Based on that, a more appropriate 2004 number for the percentage of homes tested for radon could be 38 percent, which is the 2004 statistic of 43.7 percent taking into account the 13 percent of residents left out of the 2004 survey. Another estimate is available from the Radon Program of the New Hampshire Department of Environmental Services, which conducted a survey last year in southwestern New Hampshire regarding private radon testing in indoor air. Of the 5000 residents surveyed, the Radon Program found that 49.7% of homeowners tested their home for radon in the air.¹⁴² Regardless of which statistic is used, the number of homes tested for radon has markedly increased since 1998 and is on target to reach 50 percent by 2010.

Table 22. Percentage of homes tested for radon in the air.

	1998	2004	NH Target 2010
NH	19	43.7	50
US	NA	NA	

Source: *Healthy New Hampshire 2010*;¹⁴³ *BRFSS 2001-2004*¹⁴⁴

4.3.2 Objective: Increase the percentage of public water systems that are in compliance with the new EPA MCL or Alternate Maximum Contamination Level (AMCL) for radon.

No noticeable difference has occurred in the level of radon in public water systems. The data from 1998 to 2004 are from 3,400 samples of public water systems, but not all systems were sampled evenly.¹⁴⁵ Because of this, the data are skewed toward higher radon concentrations, thus the 73 percent could be low. Also of note is that the MCL and AMCL are not yet law, though it appeared they would soon be at the time that *Healthy New Hampshire 2010* was written. As this has not yet happened, the MCL and AMCL are still only proposed rules without enforcement.¹⁴⁶ Another disclaimer to the above statistic is that radon levels can fluctuate up to 30 percent depending on what time of the year the water is tested.¹⁴⁷ Thus, testing at multiple times throughout the year would yield more reliable results than a test at a single point in time.

Table 23. Percentage of public water systems that are in compliance with the new EPA MCL or AMCL for radon.

	1999	1998-2004	NH Target 2010
NH MCL (300pCi/L)	6	6	100
NH AMCL (4000pCi/L)	70	73	100

Source: *Healthy New Hampshire 2010*;¹⁴⁸ *New Hampshire Department of Environmental Services*¹⁴⁹

4.3.3 Objective: Increase the percentage of private wells tested for radon.

No baseline for New Hampshire or the United States exists for this objective, as no test has been done to find out how many private well users have tested their wells for radon. No official target was set in the original *Healthy New Hampshire 2010* report. No state requirement to test private home wells for water quality exists, although a few towns, mostly in southern New Hampshire, do require the testing of new wells for water quality, including radon in some instances.¹⁵⁰ Since there is no regulatory body tracking the number of homes testing for radon in bedrock or artesian wells, it is difficult to estimate the exact proportion of the population taking measures to protect against the health risks associated with radon. However, experts at the New Hampshire Department of Environmental Services estimate that only 35 percent of privately owned wells in the state exceed the state median radon levels of 3500pCi/L.¹⁵¹ Analysis of radon air pollution in New Hampshire shows that Carroll County residents are the most susceptible to elevated levels of radon, so should programmatic testing of wells for radon occur, Carroll County should be emphasized.¹⁵²

Table 24. Percentage of private wells tested for radon.

	Baseline	Current	NH Target 2010
NH	NA	NA	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*¹⁵³

4.4 Lead

4.4.1 Objective: Reduce the number of tested children under age six who have blood lead levels >10 µg/Dl.

High childhood blood lead levels have decreased markedly in the past ten years. While the raw numbers are well below the 2010 target,¹⁵⁴ it may be helpful to convert all data to percentages to compare rates and to better understand the state versus national baselines. The New Hampshire 1999 baseline and the 2010 target were originally measured in number of children tested. The 1999 statistic was 820 out of the 14,610 children under age six tested, which equates to a lead rate of 5.6 percent.¹⁵⁵ The 2010 target stated “410 of tested children.” In 2005, 14,333 children under age six were tested, with only 215

showing elevated blood lead levels.¹⁵⁶ Converted to percentages, this is a 2005 rate of 1.5 percent of tested children compared to the 2010 target of 2.9 percent.

Table 25. Number of tested children under age six who have blood lead levels > 10µg/dL.

	1999	2005	NH Target 2010
NH	820/14,610 (5.6%)	215/14,333 (1.5%)	410/tested children (using 2005 totals, 2.9%)
US	4.4% (1991-1994)	NA	

Source: *Healthy New Hampshire 2010*;¹⁵⁷ NH DHHS, Division of Public Health Services¹⁵⁸

4.5 Air Quality

4.5.1 Objective: Increase the percentage of newly constructed and renovated buildings that are professionally designed to meet established air quality standards.

Healthy New Hampshire 2010 did not set any standard to judge progress in this objective. In its explanation of the object, however, it did mention the EPA’s Energy Star Homes Program as one possible standard. To this end, the EPA yearly publishes the ENERGY STAR Qualified New Homes Market Indices, which track how many new homes are Energy Star qualified. New Hampshire could use this measurement to track the general efficiency of new home construction. Using the baseline level of 0.3 percent in 2000, when the program just began, New Hampshire has shown large growth to reach a level at which 17 percent of new homes in 2006 are Energy Star qualified.¹⁵⁹

Table 26. Increase the percentage of newly constructed and renovated buildings that are professionally designed to meet established air quality standards.

	Baseline	Current	NH Target 2010
NH	NA	NA	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*¹⁶⁰

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

There seems to be an improvement since baseline in the percentage of employed adults who report a smoke-free workplace. Baseline and current data, however, must be compared with caution. The *Behavioral Risk Factor Surveillance System*, from which both statistics are drawn, changed the questions used to measure this objective between 1998 and 2003.¹⁶¹ Also of note is the Indoor Smoking Act, which passed in the New Hampshire Legislature in 2007. This act, which went into effect September 17, 2007, “prohibits smoking in restaurants, cocktail lounges, and certain enclosed public places in New Hampshire.”¹⁶² This prohibition has the potential to further increase smoke-free

workplace numbers, although not enough time has elapsed since the passage of the law to test this hypothesis.

Table 27. Percentage of employed adults who report a smoke-free workplace.

	1998	2003	NH Target 2010
NH	68	79	90
US	NA	NA	

Source: *Healthy New Hampshire 2010*;¹⁶³ BRFSS¹⁶⁴

4.5.3 Objective: Decrease the number of emissions that exceed the National Ambient Air Quality Standard.

Following the Clean Air Act of 1970 and increasing awareness in the 1990s, New Hampshire has decreased the number of emissions exceedances above the National Ambient Air Quality Standards (NAAQS). New Hampshire has already met the 2010 targets for meeting the National Ambient Air Quality Standards. Carbon Monoxide, Sulfur Dioxide, and Particulate Matter levels remain low, with no emissions exceedances between 1999 and 2006.¹⁶⁵ Ozone levels in 2006 were below the target of 5 exceedances. The year, however, was an anomaly, as New Hampshire typically has 9 days of exceedances per year,¹⁶⁶ though the general trend of ozone emissions is decreasing.¹⁶⁷

Table 28. Number of emissions that exceed the National Ambient Air Quality Standards.

	1999	2006	NH Target 2010
NH Ozone	19	3	5
NH Carbon Monoxide	0	0	0
NH Sulfur Dioxide	0	0	0
NH Particulate Matter	0	0	0

Source: *Healthy New Hampshire 2010*;¹⁶⁸ *New Hampshire Department of Environmental Services*;¹⁶⁹ *Environmental Protection Agency*^{170,171,172}

5. HEART DISEASE, STROKE, AND DIABETES

5.1 Introduction

Heart disease and stroke are the first and third leading causes of death in the state of New Hampshire, respectively, while diabetes has become the sixth leading cause of death in the state.¹⁷³ These New Hampshire statistics follow national trends, as heart disease, stroke, and diabetes are also the first, third, and sixth leading causes of death in the United States as a whole.¹⁷⁴ Deaths from heart disease, stroke, and diabetes have the

potential to increase in New Hampshire if the state's population aged 65 and older increases as projected in the first decade of the twenty-first century.¹⁷⁵ The following report updates five objectives outlined by *Healthy New Hampshire 2010* aimed at both reducing the overall death rates for these conditions and increasing the amount of adults who seek preventative and post-diagnostic care for these diseases.

- New Hampshire's death rates for coronary heart disease have declined, approaching the 2010 target and remaining below the national average.
- Little change has been seen in statewide stroke deaths, though rates remain below the national average.
- Cholesterol screening among adults has increased, nearly reaching the 2010 target and remaining above the national average.
- It appears that the percentage of adults with diabetes getting glycosolated hemoglobin measurements as recommended has increased dramatically, but this may be a result of a change in the wording of the question used to measure this objective rather than statewide behavioral change.
- The percentage of adults with diabetes receiving dilated eye exams as recommended has increased, approaching the 2010 target and remaining above the national average.

Since *Healthy New Hampshire 2010* was issued, the state of New Hampshire has made overall progress in fighting heart disease, stroke, and diabetes. The most recent numbers for all objectives in this focus area either exhibited no change or exhibited positive progress toward their 2010 target goal numbers.

5.2 Heart Disease and Stroke

5.2.1 Objective: Reduce coronary heart disease deaths.

Nationwide, the number of deaths from coronary heart disease has been declining over the past twenty years. In June, the *New England Journal of Medicine* reported that medical improvements and healthier lifestyles may have "attributed" to this decline.¹⁷⁶ The New Hampshire coronary heart disease death rate from 2000, 169.0 per 100,000 population,¹⁷⁷ shows a decrease from the baseline rate of 205.6 per 100,000 population¹⁷⁸ and remains just below the United States baseline rate. This objective is on track to meet the *Healthy New Hampshire 2010* target. Despite this reduction, several of the most prominent risk factors for heart disease remain at steady rates or have become more prevalent in the state of New Hampshire.

The decrease may be partially attributed to the widespread heart disease awareness efforts by both government and independent organizations. For example, the American Heart Association (AHA) is one of the most vocal disease-specific independent institutions in the country. Not only does AHA raise money for research and advocate for heart disease on a national level, it also reaches out to local communities in New Hampshire through such events as the Heart Walk and the "Go Red Luncheon for Women."¹⁷⁹ However,

programming that targets coronary heart disease risk factors such as obesity, diabetes, tobacco use, and inadequate exercise is needed to sustain progress.

Table 29. Coronary Heart Disease Deaths (per 100,000 Population).

	1998	2002	NH Target 2010
NH	205.6	169.0	164.5
US	208	170.8	

Source: *Healthy New Hampshire 2010*;¹⁸⁰ *American Heart Association*¹⁸¹

5.2.2 Objective: Reduce stroke deaths.

Although the stroke death rate in New Hampshire is somewhat lower than the national average, the stroke death rate from 2001 is not statistically different than the reported baseline. Therefore, as of 2001, no progress has been made toward the Healthy New Hampshire 2010 target goal. Risk factors for stroke have also remained constant or increased in prevalence in the state. For example, smoking significantly increases a person’s risk for stroke, and the percentage of New Hampshire adults who smoke has remained around 22 percent.¹⁸² From 2001-2004, obesity rates in New Hampshire, another direct risk factor for stroke, have increased.¹⁸³ In order to decrease the stroke death rate, the prevalence of several risk factors for stroke must decrease as well.

Table 30. Stroke Deaths (per 100,000 Population).

	1998	2003	NH Target 2010
NH	55.8	55.7 (95% CI: 53.3-58.2)	44.6
US	60	60	

Source: *Healthy New Hampshire 2010*;¹⁸⁴ *Cerebrovascular Disease, NH DHHS*¹⁸⁵

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

Cholesterol screenings are often used as an initial screening for adults who may be at risk for heart problems. Once health professionals identify high risk individuals, they can prescribe medications or implement dietary programs to help lower their risk of actually developing heart disease or stroke.¹⁸⁶ The percent of New Hampshire adults who in 2003 reported having had a cholesterol screening in the past five years is nearly equal to the target for 2010. Despite this overall level of progress, the *Findings for the Behavioral Risk Factor Surveillance System in New Hampshire 2001-2004* report indicates two specific populations that are less likely to receive cholesterol screenings. Specifically, New Hampshire adults with less education are significantly less likely to get screened than adults with higher levels of education, and low income adults are significantly less likely to get screened than adults with high incomes.¹⁸⁷ Cholesterol and heart disease awareness programs should target these specific populations in order to make New Hampshire’s overall high rate of cholesterol screenings applicable to all populations within the state.

Table 31. Percentage of adults who report having their blood cholesterol checked within the last five years.

	1999	2003	NH Target 2010
NH	74	79.7 (95% CI: 78.2- 81.2)	80
US	69	72.9	

Source: *Healthy New Hampshire 2010*;¹⁸⁸ *BRFSS 2001-2004*;¹⁸⁹ *National Center for Chronic Disease Prevention & Health Promotion*¹⁹⁰

5.3 Diabetes

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

Diabetes continues to be an increasing problem, both in New Hampshire and nationwide. Since *Healthy New Hampshire 2010* was first published, the affliction has risen from the seventh to the sixth leading cause of death in the state, and is currently the fifth leading cause of death in the nation.¹⁹¹ Diabetes is also expensive, with 10 percent of all health care costs nationwide related to the disease. On an individual basis, those with diabetes have medical bills 2.4 times more expensive than those who do not.¹⁹² The Diabetes Advisory Group reports that, “Being overweight is a key modifiable risk factor for diabetes.”¹⁹³ For roughly every six pounds added to an average person’s body mass index, his chance of getting Type II diabetes increases by 25 percent.¹⁹⁴

At first glance, the 2004 numbers for *Healthy New Hampshire 2010*’s objective to increase the percentage of adults with diabetes who report having a glycosolated hemoglobin measurement seems to show significant progress. Not only is the 2004 percentage of 88.6 percent much higher than the state’s 1996-1998 baseline, it also far exceeds the 2010 target. However, this progress may be partially or even completely due to a rewording of this question in New Hampshire. A simplification¹⁹⁵ in the question wording in 2000 revealed progress that may be attributed more toward the re-wording than trends in diabetes management.¹⁹⁶

Table 32. Percentage of adults with diabetes who report having had a glycosolated hemoglobin measurement in the last 12 months.

	1999	2003	NH Target 2010
NH	19	88.6	50
US	24	NA	

Source: *Healthy New Hampshire 2010*;¹⁹⁷ *BRFSS 2001-2004*¹⁹⁸

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

Retinopathy, a disease of the retina that can lead to blindness, is a potential complication associated with diabetes.¹⁹⁹ Regular eye screenings for diabetes patients often catch diabetic eye diseases before vision loss occurs,²⁰⁰ and frequent dilated eye exams can

help reduce the occurrence of blindness by up to 90 percent.²⁰¹ The 2004 percentage of New Hampshire adults with diabetes who report having a dilated eye exam in the past year indicates significant progress toward the Healthy New Hampshire 2010 target. Furthermore, both the New Hampshire baseline for this objective from 1996-1998 and the 2004 percentage are well above the national average for this objective. This indicates that awareness for diabetes-related blindness and other diabetes complications is comparatively high within the state among affected adults.

Table 32. Percentage of adults with diabetes who report having had a dilated eye exam in the last 12 months.

	1996-1998	2004	NH Target 2010
NH	71	76.4	80
US	56	70	

Source: *Healthy New Hampshire 2010*;²⁰² *BRFSS 2001-2004*;²⁰³ *Mukhtar et al.*²⁰⁴

6. IMMUNIZATION AND INFECTIOUS DISEASES

6.1 Introduction

An essential aspect of maintaining a healthy population is preventing the spread of communicable diseases. In the young and elderly, vaccination is especially important to prevent the chance of serious illness or death, and it is on those age groups that the *Healthy New Hampshire 2010* section on preventable diseases was focused. When the report was issued, most of the New Hampshire's measures on vaccination were well above the national average, and they have continued to rise throughout the current decade, albeit at a slower pace than national progress. However, both pneumonia and influenza vaccination rates fall short of the progress needed to reach 2010 targets. By most measures of immunization rates, the population of New Hampshire still fares slightly better than the national average.

- Recommended immunizations for two year olds may have increased slightly, though remain short of the 2010 target.
- The vaccination level among New Hampshire adolescents has remained high, with levels at baseline and currently approximating the 2010 target.
- Pneumonia vaccination among seniors has risen, but has not increased at the rate of the national average and remains far short of 2010 targets.
- Influenza vaccination among seniors has risen slightly, but is far from the 2010 target and well below the national average.

6.2 Objective: Increase the percentage of two year olds who receive all universally recommended vaccines.

Since 1999, there has been a slight increase in the percentage of two year olds vaccinated for all recommended diseases. As of 2005, 83 percent of two year olds have received all of the physician recommended vaccinations for their age.²⁰⁵ This number, however, is

reported with a confidence interval ranging from 76.8 (below the baseline) to 88.5 (well above baseline), making progress in this objective unclear.²⁰⁶

Table 33. Percentage of two year olds receiving all universally recommended vaccines (does not include Varicella).

	1999	2005	NH Target 2010
NH	78	82.8 (95% CI: 76.8-88.5)	90
US	73	80.8 (95% CI: 80.0-81.8)	

Source: *Healthy New Hampshire 2010*; ²⁰⁷ NH DHHS Immunization Data²⁰⁸

6.3 Objective: Increase the percentage of adolescents who receive all recommended vaccines.

When *Healthy New Hampshire 2010* was published, 98 percent of adolescents in the state had received all recommended vaccinations.²⁰⁹ However, baseline data did not include vaccinations for Hepatitis B, though this was included in the target and was collected in current measurement. Although there is a slight drop in the percentage of inoculated adolescents, the difference is not significant. One way that this high level has been maintained is by state-mandated proof of vaccination as a requirement for enrolling in school.²¹⁰

Table 34. Percentage of adolescents who receive all recommended vaccines.

	1999	2005	NH Target 2010
NH	98 (not including Hepatitis B)	97% (including Hepatitis B) *	98% (including Hepatitis B) ²¹¹
US	NA		

Source: *Healthy New Hampshire 2010*; ²¹² NH DHHS Immunization Data²¹³

*Data based on coverage in 7th grade.

6.4 Objective: Increase the percentage of independently living adults 65 or older who report ever having been vaccinated against pneumococcal disease.

In 1999, only 60 percent of adults over 65 in New Hampshire had been inoculated for pneumococcal disease, which was still above the national average of 55 percent.²¹⁴ By 2006, that number had crept up to 68 percent.²¹⁵ The United States as a whole experienced an even greater increase, and New Hampshire is now just above the national average.²¹⁶ If New Hampshire is to meet the 2010 goal of 90 percent, the rate of seniors getting vaccinated against pneumococcal disease will have to increase considerably.

Table 35. Percentage of independently living adults 65 or older who report ever having been vaccinated against pneumococcal disease.

	1999	2006	NH Target 2010
NH	60	68	90
US	55	67	

Source: *Healthy New Hampshire 2010*; ²¹⁷ BRFSS 2006²¹⁸

6.5 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 percentage of citizens over 50 who had received a flu shot in the previous 12 months also increased from 46 percent to 53 percent, an increase in prevalence similar in size to that of pneumococcal vaccine.²¹⁹ While progress is being made, the 2010 target again seems well out of reach.

Table 36. Percentage of independently living adults 50 or over who report having been vaccinated against influenza in the last 12 Months.

	1997	2006	NH Target 2010
NH	46	53	80
US	68	NA	

Source: *Healthy New Hampshire 2010*;²²⁰ *BRFSS 2004*²²¹

7. INJURY AND VIOLENCE PREVENTION

7.1 Introduction

Injury and violence statistics for the state of New Hampshire are mixed. Injuries, unlike accidents, are largely preventable and include such incidents as falling, drowning, suffocation, poisoning, and wounds resulting from firearms, motor vehicle accidents, or fires.²²² While New Hampshire’s death rate from unintentional injury is consistently lower than that for the United States, unintentional injury was the leading cause of death for residents of New Hampshire between the ages of five and 34 in 2000.²²³ *Healthy New Hampshire 2010* established five areas of injury and violence prevention to target for improvement: reducing fall injury deaths among the elderly, reducing motor vehicle occupant deaths, reducing firearms deaths, reducing physical assault injury, and reducing unintentional injury—excluding motor vehicle occupant injury—among children and youth.²²⁴

- Fall-related deaths in seniors have increased dramatically in the state, reflecting national trends.
- The number of motor vehicle occupant deaths, firearms deaths, and unintentional injuries sustained by people under age 19 has declined since 1998, but remain short of 2010 targets.
- Physical assault injuries have increased in the state since baseline measurements.

Some of the changes in the benchmarks could be attributed to changes in state or local policy, but much is likely attributed to random fluctuations due to the very small number of deaths and injuries in each category. All of the trends exhibited in New Hampshire reflect national patterns.

7.2 Objective: Reduce fall injury deaths for adults age 65 and older.

While fall injuries are pervasive among all age groups, the elderly are particularly vulnerable; deaths among people 75 or older accounted for 85 percent of all fall injury deaths nationwide in 2004.²²⁵ In the US, the highest rate of inpatient hospitalization for the elderly is due to fall injuries, and falls are the leading cause of both fatal and nonfatal injuries among adults 65 and older.²²⁶ New Hampshire has failed to reduce the number of fall injury deaths among the elderly. While the goal of the initiative was to decrease the number of these deaths by approximately 20 percent, the death rate actually increased by almost 60 percent from 1998 to 2004.²²⁷ The increase in fall-related deaths in New Hampshire reflects a similar increase nationwide, as the number of fall injury deaths among adults aged 65 or older in the United States grew by 48 percent from 1998-2004 and has been steadily rising for several decades.²²⁸

Many factors may have contributed to this trend. Growing numbers of both men and women are being diagnosed with either osteoporosis or low bone density, both of which increase the likelihood that a fall will result in injury. In 2002, approximately 30 million women over age 50 were diagnosed with osteoporosis, a number that many health professionals expect to climb to 41 million by 2020.²²⁹ Additionally, the percentage of New Hampshire’s population that is older than 85 has slightly increased, growing from 1.44 percent in 1998 to 1.79 percent in 2005.²³⁰

Despite the rising number of fall injury deaths, there are several ways to diminish the risk of falling among the elderly. These include balance and strength training, improvements to home safety, management of medications that affect balance, treatment of chronic health problems associated with falling, and education.²³¹ Furthermore, several national efforts are currently underway to reduce the number of fall injuries among adults aged 65 and older. The National Safety Council is assisting Congress in developing legislation to prevent falls among the elderly,²³² the National Council on Aging is leading an initiative to create a National Falls Prevention Action Plan, and the Center for Disease Control has instituted the healthy aging project.²³³ Within New Hampshire, the Safety and Health Council of Northern New England collaborated with the New Hampshire Fall Risk Reduction Task force beginning in 2000 to train 20 New Hampshire teams in best practices in fall risk reduction assessment and intervention.²³⁴

Table 37. Unintentional fall injury deaths for adults age 65 and older (per 100,000 population).

	1997-1998	2004	NH Target 2010
NH	29.2	46.8	23.3
US	27.9 (1998)	41.4	

Source: *Healthy New Hampshire 2010*,²³⁵ *NCHS Vital Statistics System*,²³⁶ *WISQARS 2005*²³⁷

7.3 Objective: Reduce motor vehicle occupant deaths.

While motor vehicle injuries are the leading cause of injury-related death in both the United States and New Hampshire, New Hampshire had already surpassed its goal of reducing the number of motor vehicle occupant deaths to 5.4 deaths per 100,000 people in 2004.²³⁸ This reduction mirrors a national trend, as the national rate declined by almost 50 percent during this period. The increased prevalence of certain safety features such as side airbags in motor vehicles is one possible factor in this reduction. Many new safety features particularly help protect child safety. For example, in 2002, the government began to require that the LATCH (lower anchors and tethers for children) system be included in most cars and safety seats.²³⁹

In January 2004, New Hampshire began to require that children under the age of six and shorter than 55 inches use state-approved safety seats. Use of booster seats decreases the risk of a child dying in a motor vehicle crash by up to 54 percent.²⁴⁰ While seatbelt use among adults in New Hampshire has not increased since 1998, compliance with child safety belt laws has increased slightly, with 94.2 percent of people reporting compliance currently compared to 91.95 percent in 1998.²⁴¹ Despite New Hampshire’s progress, further improvements are possible. For example, New Hampshire is the only state without a mandatory safety belt law for adults and, together with Wyoming, the state has the lowest rate of seat belt use in the country. As recently as June 2007, the New Hampshire Senate rejected a bill that would have established a mandatory seat belt law.²⁴² Using airbags and safety belts together reduces the risk of death in a motor vehicle accident by up to 50 percent,²⁴³ and an estimated 9,553 deaths could have been prevented nationwide in 1999 alone had the vehicle occupants been wearing safety belts.²⁴⁴

Table 38. Number of Motor Vehicle Occupant Deaths (per 100,000 population).

	1997-1998	2004	NH Target 2010
NH	6.8	4.8	5.4
US	15.0 (1998)	6.8	

Source: *Healthy New Hampshire 2010*;²⁴⁵ *NCHS Vital Statistics System*;²⁴⁶ *WISQARS 2005*²⁴⁷

7.4 Objective: Reduce firearms deaths.

In 2004, New Hampshire saw an overall decline of 25.4 percent in firearms deaths since 1998. New Hampshire is on track to meet its target by 2010. As of 2003, only eight states had fewer firearms deaths per capita than did New Hampshire.²⁴⁸ Despite the fact that New Hampshire has relatively few gun control laws – the Brady association²⁴⁹ gave the state’s gun legislation a D- on its ability to shield families from firearms-related violence – the pattern exhibited in New Hampshire is part of a larger national trend of decreasing numbers of firearms deaths. Nationally, firearm deaths have declined 9.5 percent between 1998 and 2004.²⁵⁰ Several factors may have contributed to the decline in firearms deaths. There has been a nationwide reduction in the number of arms dealers of almost 80 percent, with 50,630 dealers active in 2007 compared to 245,628 dealers in

1994.²⁵¹ The percentage of American households that reported keeping guns in the home has similarly dropped. While 43.9 percent of households said they had a gun in the home in 1994, only 34.5 percent said so in 2006.²⁵²

Table 39. Firearms deaths (per 100,000 population).

	1997-1998	2004	NH Target 2010
NH	7.1	5.4	4.9
US	12.1 (1998)	10.7	

Source: *Healthy New Hampshire 2010*;²⁵³ *WISQARS 2005*;²⁵⁴ *NCHS Vital Statistics System*²⁵⁵

7.5 Objective: Reduce physical assault injury.

The number of physical assault injuries in New Hampshire has increased since baseline measurement. While New Hampshire has one of the lowest crime rates in the nation, with the lowest crime index as of 2002, it is the only state that reported an increase in violent crimes from 1990-2000. In 2002, one aggravated assault occurred in New Hampshire every 7.5 hours.²⁵⁶ Generally, assault victims are young males. In New Hampshire, males accounted for 65 percent of homicide victims, 80 percent of hospital discharges from assault injuries, and 61 percent of emergency room visits from assault injuries.²⁵⁷ Nationwide, the number of aggravated assaults increased from 361.4 assaults per 100,000 people in 1994 to 971 assaults in 2005, revealing that the state's increasing assault injury rate follows national trends.²⁵⁸

Table 40. Physical assault injuries (outpatient and ER discharges/100,000 population).

	1997-1998	2004	NH Target 2010
NH	262.0	274.1	209.6
US	NA	NA	

Source: *Healthy New Hampshire 2010*;²⁵⁹ *NCHS Vital Statistics System*²⁶⁰

7.6 Objective: Reduce unintentional injury, excluding motor vehicle occupant injury, of children and adolescents.

New Hampshire has made substantial progress toward reducing the number of unintentional injuries (excluding motor vehicle occupant injuries) among children and adolescents, a pattern that is consistent with national trends. Several possible factors could have contributed to the decrease in unintentional injuries among this age group. Nationwide, several categories of unintentional injuries have declined. The rate of unintentional poisonings among this age group fell from 179.67 injuries per 100,000 in 2000 to 155.92 injuries per 100,000 in 2006. The rate of injuries caused by falls similarly declined, dropping from 3,467.23 per 100,000 in 2000 to 3,289.02 in 2006. During this period, the rates of drowning injuries among people younger than 19 also decreased, falling from 8.59 per 100,000 to 4.79 per 100,000.²⁶¹

Locally, several organizations within New Hampshire focus on child welfare, and may have contributed to this progress. In the past 12 years, the Children’s Alliance of New Hampshire has founded a statewide child advocacy network of nearly 200 organizations to promote a public policy agenda to help children, youth, and families. The Alliance has also created a pilot program for school-linked health services and funded a home-based visiting nurse program that provides nutrition, child development, parenting, family planning, and resource referral information to at-risk mothers and their newborns.²⁶² The Injury Prevention Center at Dartmouth-Hitchcock Medical School also works to reduce the number of child injuries.²⁶³

Table 41. Number of unintentional injuries, excluding motor vehicle occupant injury, of children and adolescents (inpatient discharges per 100,000 population age 0-19 years).

	1998	2004	NH Target 2010
NH	146.5	131.1	117.2
US	NA	158.16	

Source: *Healthy New Hampshire 2010*,²⁶⁴ *NCHS Vital Statistics System*,²⁶⁵ *WISQARS 2005*²⁶⁶

8. MATERNAL, INFANT, AND CHILD HEALTH

8.1 Introduction

Healthy New Hampshire 2010 set goals in its Maternal, Infant and Child Health focus area for the following categories: Low Birth Weight (LBW), early and adequate prenatal care, smoking during pregnancy, alcohol consumption during pregnancy, and hearing loss screening. This focus area largely saw a decline in health indicators, away from 2010 targets.

- Both categories of LBW infants and prenatal care have moved away from their targets; numbers of LBW infants have increased and the numbers of women attaining early and adequate prenatal care have decreased.
- Both smoking and alcohol consumption during pregnancy have decreased relative to baseline values, moving toward the 2010 targets.
- Alcohol consumption during pregnancy and hearing loss screening of newborns are developmental objectives, so baseline information and targets are not available.

Women of low socioeconomic status, measured by whether they received Medicaid, and younger women, aged 15-24, tended to have LBW babies and less adequate prenatal care. They also tended to smoke and drink more during pregnancy than their non-Medicaid, older counterparts.

8.2 Objective: Reduce low birth weight (<2500 grams) and very low birth weight (<1500 grams) births.

Low birth weight (LBW), characterized by a weight of less than 2500 grams, is associated with higher rates of infant mortality and developmental disabilities. The costs of care for LBW infants are more than half the total costs for treating all newborns.²⁶⁷ In 1998, 5.7 percent of newborns in New Hampshire were LBW, and 1.1 percent were very low birth weight (VLBW), or less than 1500 grams. While *Healthy New Hampshire 2010* set a goal of 5 percent LBW infants and 0.8 percent VLBW infants, the number of infants with LBW seems to be on the rise. In 2004, 6.7 percent of infants in the state were LBW—a one percent increase from 1998. LBW has increased nationally from 5.7 percent to 8.1 percent of all births.²⁶⁸

The national increase in LBW may be attributed to an increase in multiple birth babies due to fertility drugs. Multiple birth babies, such as twins and triplets, tend to be LBW more often than their singleton counterparts.²⁶⁹ According to the New Hampshire Department of Health and Human Service, the singleton LBW rate was 5.2 percent, and VLBW rate was 1.1 percent in 2002.²⁷⁰ In order to assess LBW in the future, and appropriately target populations, these variables must continue to be separated, and the LBW for singleton births versus overall births should be tabulated. Socioeconomic factors may contribute to LBW through decreased access to adequate prenatal care and increased tobacco and alcohol consumption during pregnancy. Age also seems to play a role, with LBW following a U-shaped curve when plotted against age. LBW rates in New Hampshire were high for mothers aged 15-19, decreased for mothers aged 25-34, and increased again for mothers aged 40-44.²⁷¹

Table 42. Percent Low Birth Weight Infants.

	1998	2004	NH Target 2010
NH Low Birth Weight (< 2500 g)	5.7	6.7	5.0
NH Very Low Birth Weight (< 1500 g)	1.1	NA	0.8
US Low Birth Weight (< 2500 g)	7.6	NA	
US Very Low Birth Weight (< 1500 g)	1.4	NA	

Source: *Healthy New Hampshire 2010*; ²⁷² *The Annie E. Casey Foundation*²⁷³

8.3 Objective: Increase the percentage of women who receive early and adequate prenatal care.

Adequate prenatal care is correlated with lower rates of LBW infants.²⁷⁴ Prenatal care, as measured by timeliness and dosage of prenatal care visits, can be evaluated using the Kotelchuck Index. The Kotelchuck Index breaks down prenatal care into adequacy of

initiation of prenatal care and adequacy of received services. Adequate is defined as initiation of prenatal care within the third or fourth month of pregnancy, and going to 80-110 percent of the recommended doctor's visits. According to this index, 96 percent of New Hampshire women achieved adequate initiation of prenatal care in 2002; eighty-eight percent received adequate services by going to the doctor's visit the recommended number of times.²⁷⁵ However, the numbers have gotten worse overall since 1998, when 86.5 percent of all NH women received early and adequate prenatal care.²⁷⁶ In 2004, 81.7 percent of women received prenatal care.²⁷⁷ Due to these decreasing numbers, it is helpful to have the breakdown of initiation of care and received services in order to better understand why prenatal care has decreased.

Adequate prenatal care can be correlated with many of the same factors as LBW, including low socioeconomic status. In 2005, 74.8 percent of women on Medicaid had early and adequate prenatal care,²⁷⁸ approaching the low national average of 74 percent in 2002,²⁷⁹ compared to 84.3 percent of women not on Medicaid.²⁸⁰ Age can also influence the likelihood of received early and adequate prenatal care. In 2002, approximately 74 percent of 15-20 year olds and 83 percent of 20-24 year olds in New Hampshire received early and adequate prenatal care; close to 85 percent of women in age groups ranging from ages 25 to 44 received early and adequate prenatal care.²⁸¹ This indicates that about a quarter of Medicaid recipients and 15-20 year olds do not receive early and adequate prenatal care. As with LBW, this can be addressed on many fronts, including addressing economic inequalities and lack of access to healthcare among certain groups. Adequate prenatal care may only increase after these large social problems are addressed. In the meantime, targeting programs to teens and low income patients and following through with goals in the Reproductive and Sexual Health focus area by reducing the number of teenage pregnancies may help reduce the numbers of women lacking adequate prenatal care.

Table 43. Percent of women receiving early and adequate prenatal care.

	1998	2004	NH Target 2010
NH	86.5	81.7	90
US	74 (1997)	NA	

Source: *Healthy New Hampshire 2010*;²⁸² *Child and Maternal Health Bureau*²⁸³

8.4 Objective: Reduce the percentage of pregnant women who report smoking cigarettes.

When pregnant women smoke cigarettes, they are twice as likely as non-smoking pregnant women to have LBW infants.²⁸⁴ In 1998, 17 percent of pregnant women in New Hampshire reported smoking cigarettes. This number has decreased to 14 percent of pregnant women in 2002.²⁸⁵ While these numbers have decreased, they display a higher rate than the US average of approximately 12 percent in 2002.²⁸⁶

The disparity however between women on Medicaid and women not on Medicaid is pronounced; about 38 percent of women on Medicaid used tobacco during pregnancy, compared to approximately 8 percent of women not on Medicaid.²⁸⁷ In addition, the 15-

24 year old age group is more likely to smoke during pregnancy than any other age group. About 25 percent of Non-Medicaid 15-24 year olds smoked during pregnancy, and 31 percent of Medicaid 15-24 year olds smoked during pregnancy in 2002.²⁸⁸ These trends may help target smoking cessation programs to at-risk populations.

Table 44. Percent of women who reported smoking cigarettes when pregnant.

	1998	2002	NH Target 2010
NH	17	14	10
US	13 (1997)	12	

Source: *Healthy New Hampshire 2010*,²⁸⁹ Centers for Disease Control and Prevention;²⁹⁰ DHHS, *New Hampshire Maternal and Child Health Needs Section*²⁹¹

8.5 Objective: Reduce the percentage of pregnant women who report drinking alcohol in the past month.

Babies born to women consuming alcohol during pregnancy are more likely to have LBW, mental retardation, fetal alcohol syndrome and growth abnormalities than those born to women who abstain from alcohol during pregnancy.²⁹² While the *Healthy People 2010* objective in this category is to increase the number of pregnant women who report abstinence from alcohol use in the past month to 94 percent,²⁹³ the target in *Healthy New Hampshire 2010* is developmental. Alcohol consumption during pregnancy has decreased in New Hampshire in the past nine years, from 3.2 percent in 1992 to 1.3 percent in 2001. While this decrease reflects the national trend, the percentages are higher for New Hampshire than the national average; 0.9 percent of women nationwide consumed alcohol during pregnancy in 2001.²⁹⁴

Following smoking trends, 2.2 percent of women on Medicaid consumed alcohol during pregnancy in 2001, while 1.1 percent of Non-Medicaid women consumed alcohol. Of 18-20 year olds in both categories, 1.9 percent used alcohol during pregnancy. The same percentage of those aged 35-44 also used alcohol while pregnant.²⁹⁵ It may be useful to target these at-risk populations in future interventions in order to bring down overall rates of alcohol consumption during pregnancy.

Table 45. Percent of pregnant women who reported consuming alcohol in past Month.

	1997	2001	NH Target 2010
NH	3.2 (1992)	1.3	Developmental
US	14	NA	

Source: *Healthy New Hampshire 2010*;²⁹⁶ NH DHHS, *New Hampshire Alcohol Data*²⁹⁷

8.6 Objective: Increase the proportion of newborns that are screened for hearing loss by age one month.

Late diagnosis of hearing loss in infants can lead to communication, social, and psychological problems. While infants with hearing loss can be diagnosed at birth and

fitted with amplification devices at 2 weeks, many infants are not diagnosed until 2.5 to 3 years of age.²⁹⁸ This objective is developmental in *Healthy New Hampshire 2010*, so no baseline information has been provided, nor target set. However, some current data are available. The Maternal and Child Health Bureau awarded the New Hampshire Office of Community and Public Health a grant in 2000 to implement a Universal Newborn Hearing Screening Program, with the goal of raising the percentage screened from 20 percent in 2000 to 80 percent in 2005.²⁹⁹ In 2001, the CDC awarded New Hampshire’s public health departments a grant to develop a centralized Early Hearing Detection and Intervention (EHDI) tracking and surveillance system that measured the results of the screening program.³⁰⁰ According to the EHDI tracking system, New Hampshire screened 90.0 percent of newborns in 2004 and 88.5 percent of newborns in 2005.³⁰¹

Table 46. Increase the proportion of newborns that are screened for hearing loss by age one month.

	Baseline	2005	NH Target 2010
NH	NA	88.5	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*;³⁰² National Center for Hearing Assessment and Management³⁰³

9. MENTAL HEALTH

9.1 Introduction

This section presents an assessment of the *Healthy New Hampshire 2010* progress in the focus area of mental health. Overall, this is a focus area that needs improvement.

- While the suicide death rate has increased within the state, the rate of suicide attempts has fallen.
- Mental health assessment and screening from a primary care provider is a developmental objective. No baseline data exist, nor has a target been set; state information is currently unavailable.
- Mental health assessment and screening within New Hampshire jails is a developmental objective, with no baseline data provided or target set. However, current data show that the state falls below national rates.

9.2 Objective: Reduce suicide deaths.

Suicide is the eleventh leading cause of death in the United States.³⁰⁴ Suicide has accounted for 14,633 years of potential life lost between 1999–2001 (death before age 75 years),³⁰⁵ and affects many individuals in addition to the victim. The 2004 New Hampshire State Plan on Suicide Prevention states, “For each suicide death, there are an estimated six survivors of suicide—the family and close friends. In addition, many others are affected, including those providing emergency care to the victims and those who feel they failed to prevent the death.”³⁰⁶

Little improvement has been made in this objective.³⁰⁷ Between 1996 and 1998, the overall suicide death rate in New Hampshire was 11.8 per 100,000 residents.³⁰⁸ Between 1999 and 2005, annual suicide death rates in New Hampshire varied between 10.3 and 13.3 deaths per 100,000 residents. The average suicide death rate over those six years was 11.5 deaths per 100,000.³⁰⁹ Over the same period, the suicide death rate for males varied between 16.3 and 21.3 deaths per 100,000, averaging 18.7 per 100,000. For females, the average rate was 4.46, varying between 3.56 and 5.47 deaths per 100,000.³¹⁰ Thus, marginal improvements may have been made in this objective, but the state remains far from achieving the 2010 target.

Additionally, the suicide death rates for New Hampshire do not compare favorably to national statistics.³¹¹ From 1999 to 2005, the annual suicide death rate for the United States varied between 10.4 and 11.0 per 100,000, averaging 10.8 per 100,000 over the period (compared to 11.5 in New Hampshire). The 2005 suicide death rate for New Hampshire (12.4 per 100,000) exceeded the national level (11.0 per 100,000) by 12.7 percent.³¹² The annual suicide death rates for males in the United States varied between 17.1 and 18.0 per 100,000 from 1999 to 2005. The average over this period was 17.6 per 100,000, compared to 18.7 per 100,000 in New Hampshire. Similarly, the annual suicide death rate for females in the United States varied between 4.00 and 4.61 per 100,000 from 1999 to 2005. The average over this period was 4.3 per 100,000, compared to 4.5 per 100,000 in New Hampshire. Thus, suicide death rates in New Hampshire consistently remain above the national levels.

Table 47. Number of deaths by suicide (per 100,000 population).

	1996-1998	1999-2005	NH Target 2010
NH total	11.8	11.5	4.0
NH male	19.1	18.7	
NH female	5.3	4.5	
US total	11.3	10.8	
US male	19.2	17.6	
US female	4.3	4.3	

Source: *Healthy New Hampshire 2010*,³¹³ *WISQARS 1999-2005*³¹⁴

9.3 Objective: Reduce suicide attempts.

Suicide attempts seem to have decreased in New Hampshire. According to 2003 data, 63.5 hospital discharges per 100,000 residents were due to self-inflicted injury.³¹⁵ This represents a 43.4 percent drop in suicide attempts from 1996-1998, and it is also lower than the estimated 2004 national rate of suicide attempts.³¹⁶ New Hampshire may have reached its goal of lowering the suicide attempt rate before the 2010 target date, although data for other years were not available.

Current data for suicide attempts in the 15-44 age group were not available; the closest available was averaged data for individuals aged 15-49.³¹⁷ These numbers should

therefore be compared with caution. However, New Hampshire’s suicide attempt rate for the 15-49 age group is below the estimated national average for 2004.³¹⁸

The overall rate of suicide attempts has decreased, but the overall rate of suicide deaths has remained largely unchanged. This could indicate that suicide attempts have become more efficacious, where for every 63.5 hospital discharges (suicide attempts), there are 12.3 suicide deaths. This is a 19.4 percent “success rate” (12.3 deaths/63.5 discharges). This is almost double the rate in 1996-1998, which is closer to 10.5 percent (11.8 deaths/112.2 discharges).

Table 48. Outpatient/ER self-inflicted injury discharges (per 100,000 population).

	1996-1998	2003	NH Target 2010
NH total	112.2	63.5	84.1
NH age 15-44	212.9	102.3 (15-49)*	159.0
US total	NA	71.6 (2004 est.)	
US age 15-44	NA	112.3 (15-49)* (2004 est.)	

Source: *Healthy New Hampshire 2010*,³¹⁹ *Suicide Prevention Resource Center, New Hampshire Fact Sheet*,³²⁰ *Suicide Prevention Resource Center, US Fact Sheet*,³²¹ *Average rate of hospitalized attempts for age groups 15-19, 20-29, and 30-39.

9.4 Objective: Increase the number of persons who receive mental health screening and assessment in a primary health care setting.

For many people with mental health disorders, primary care providers are usually their “initial point of contact.”³²² As such, screening and assessment in primary care would allow for early detection and treatment of these problems. Moreover, primary health care providers also have the “access to a large segment of the population,”³²³ and thus would be able to have the largest impact on people if they provided this service.

This objective was developmental in *Healthy New Hampshire 2010*, so no target was set and no baseline data were provided. Two different indicators were found that try to measure this objective at a national level in two different ways. While neither perfectly fits this measure, it is worth discussing the findings to see if they can further shed light on ways to think about this issue.

First, a national study was conducted to measure the number of insurance products that require the health care provider to have mental health and assessment screenings. The study covered about 400 national health plans in two different years. The results indicated that “by 2003, 34 percent of the products had any behavioral health screening requirements.”³²⁴ Most people pay for their healthcare by health insurance, using the primary care providers for which they are insured. If insurance companies require health

providers to offer mental health screening and assessment, then these health providers would be more likely to have them (in order to be paid by the insurance companies). This could thus be a measure to see how many primary care providers provide this service. The limitation for using this measurement is that it does not directly indicate the number of patients who have received this screening and assessment.

Second, a different national study examined the number of primary health care patients who received mental health screening from their primary care provider. This was a nationally representative survey of 7,301 primary care patients. The results of this study found that 21.2 percent of these patients were surveyed for depression and anxiety symptoms from their primary health provider.³²⁵ These findings are limited in scope, as the screenings and assessments only look for two mental health illnesses rather than the whole range of possible mental health issues. As such, it is limited in its utility as a measurement.

Table 49. Number of persons who receive mental health screening/assessment in a primary health care setting.

	1998	2003	NH Target 2010
NH	NA	NA	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*³²⁶

9.5 Objective: Increase the number of persons who receive mental health screening upon entry into the criminal justice system.

As noted in *Healthy New Hampshire 2010*, “people with mental illnesses are over-represented in jail populations,”³²⁷ yet it remains unclear how many of the inmates in the state are being assessed and screened. The New Hampshire Department of Safety reports partial data to the U.S. Department of Justice, which estimates statewide crime rates based on those departments that choose to report data.³²⁸ According to one study, approximately 80 to 85 percent of adult offenders have a substance abuse issue, and an estimated 40 percent have had some form of a mental health issue.³²⁹ Other estimates claim that somewhere between one in four and one in five of the state’s prisoners suffer from mental illness.³³⁰ A more comprehensive study is needed to better understand the extent of the problem in New Hampshire.

In 2000, 50 percent of New Hampshire jails screened inmates, with 62.5 percent conducting psychiatric assessment tests as well. In the United States overall, 69.5 percent of state correctional facilities screen inmates at intake, while 65.2 conduct psychiatric assessment tests to prison populations.³³¹ In fiscal year 2005, 27 percent of the prison population was referred for mental health treatment. The previous year, the figure was 30.5 percent.³³²

Table 50. Percentage of state correctional facilities that have mental health screening and assessment.

	1998	2000	NH Target 2010
NH screen inmates at intake	NA	50	Developmental
NH conduct psychiatric assessment tests	NA	62.5	Developmental
US screen inmates at intake	NA	69.5	
US conduct psychiatric assessment tests	NA	65.2	

Source: *Healthy New Hampshire 2010*,³³³ Beck et al.³³⁴

10. NUTRITION AND PHYSICAL ACTIVITY

10.1 Introduction

At the current pace, most of the goals of *Healthy New Hampshire 2010* for improved nutrition and physical activity will not be met. The problems for this focus area stem from two issues: First, health is actually declining in some domains, and second, certain statistics are no longer measured.

- The prevalence of overweight and obesity has increased.
- Statistics for some objectives, such as youth fruit and vegetable consumption, calcium intake, and high school enrollment in physical education are no longer being collected.
- Physical activity has increased, though may not reach 2010 targets. Because of a change in national recommendations since *Healthy New Hampshire 2010*, interpretation of this data is difficult.

10.2 Objective: Reduce the prevalence of overweight and obesity.

The targets set by *Healthy New Hampshire 2010* for obesity and overweight populations have not been met, and the problem instead has become considerably worse. In adults, being overweight is defined through the Body Mass Index (BMI). A BMI greater than or equal to 25 is considered overweight; a BMI greater than or equal to 30 is considered obese. For children, being overweight is defined as falling within the 95th or greater percentile of the BMI.³³⁵ In 2002, 38.5 percent of adults were overweight and 17.9 percent were obese.³³⁶ In 2006, overweight populations went down slightly to 38.3 percent, but obesity climbed up to 22.4 percent, for an overall prevalence of 60.7 percent overweight and obese adults in the state.³³⁷ Prevalence has also increased for adolescents in the state, rising from 9 percent at baseline to 11.4 percent in 2006.³³⁸

Table 51. Prevalence of Overweight and Obese Citizens (percent).

	1998	2006	NH Target 2010
NH adults	50	60.7	40
NH 9th-12th graders	9	11.4	5
US adults	56	NA	
US 9th-12th graders	10	NA	

Source: *Healthy New Hampshire 2010*;³³⁹ *NH BRFSS*;³⁴⁰ *NH Youth Risk Behavior Survey*³⁴¹

10.3 Objective: Increase the percentage of persons who engage in physical activity for thirty minutes or more five or more times per week.

Significantly more adults are exercising for 30 minutes a day, five times a week, than in 1998. If this trend continues, the target set in *Healthy New Hampshire 2010* should be reached. In 2005, 32 percent of high school students did moderate physical activity five or more days a week.³⁴² This statistic, however, is now less valuable. In 2001, the national *Healthy People 2010* project changed its standards for how much exercise is critical for an individual. The new recommendation is to participate 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.”³⁴³ As of 2003, 54.6 percent³⁴⁴ of adults met this new standard, and as of 2005, 76.6 percent³⁴⁵ of 9th to 12th graders met this new standard. It is difficult to interpret this new data without the same information from the late 1990s; however, it seems that a large percentage of 9th to 12th graders students now exercise regularly.

Table 52. Percentage of population that reports engaging in 30 minutes or more of physical activity at least 5 times a week.

	1998	2003	NH Target 2010
NH adults	24	42.5	50
NH 9th-12th graders	27 (1999)	32 (2005)	50
US adults	15 (1997)	NA	
US 9th-12th graders	27 (1999)	NA	

Source: *Healthy New Hampshire 2010*;³⁴⁶ *NH BRFSS*;³⁴⁷ *NH Youth Risk Behavior Survey*³⁴⁸

10.4 Objective: Increase the percentage of 9th through 12th grade students enrolled in physical education class.

Enrollment in physical education (PE) provides exercise and an opportunity for students to learn methods of exercise that can be applied in the future for lifelong health. The *New Hampshire Youth Risk Behavior Study* no longer asks about PE enrollment, so it is difficult to analyze any trend.³⁴⁹ In the New Hampshire public school system, only one PE class is required, and beyond that enrollment is optional.³⁵⁰

Table 53. Percentage of 9th-12th graders enrolled in a PE class.

	1999	2002	NH Target 2010
NH	40	NA	50
US	56	39.2	

Source: *Healthy New Hampshire 2010*;³⁵¹ *Participation in High School P.E.*, CDC³⁵²

10.5 Objective: Increase the percentage of persons who consume 5 or more servings of fruits and vegetables daily.

People who eat only small amounts of fruits and vegetables are more likely to have an increased risk of chronic diseases including stroke, diabetes, some types of cancer, heart disease, and high blood pressure compared to those who eat more generous amounts.³⁵³ The target set by *Healthy New Hampshire 2010* for this objective has not been met for adults, and minimal progress has been made. Over the course of seven years, the percentage of adults eating 5 or more servings of fruits and vegetables daily has increased by only 1.1 percent.³⁵⁴ With regard to the youth, this is yet another statistic that has stopped being accounted for by the *NH Youth Risk Behavior Study* survey.³⁵⁵

Table 54. Percentage of people who eat 5 or more servings of fruits and vegetables a day.

	1998	2005	NH Target 2010
NH adults	28	29.1	50
NH 9th-12th graders	25	NA	50

Source: *Healthy New Hampshire 2010*;³⁵⁶ *NH BRFSS*³⁵⁷

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

The intake of calcium for adults is one of the many New Hampshire statistics no longer accounted for, and between 1999 and 2005 the percentage of 9th-12th graders meeting those dietary recommendations for calcium dropped by 2.5 percent.³⁵⁸ Surveys that track osteoporosis awareness may function as a proxy measure for adult calcium intake. Nearly all surveyed New Hampshire citizens have heard of osteoporosis. Furthermore, 57.7 percent of women who have heard about osteoporosis have been counseled by a health professional about it.³⁵⁹

Table 55. Percentage of people who meet the dietary recommendations for Calcium.

	1998	2005	NH Target 2010
NH adults	37	NA	75
NH 9th-12th graders	29 (1999)	26.5	75

Source: *Healthy New Hampshire 2010*;³⁶⁰ *NH Youth Risk Behavior Survey*³⁶¹

11. REPRODUCTIVE AND SEXUAL HEALTH

11.1 Introduction

Reproductive and sexual health is an essential aspect of healthy adolescent development. Sexual activity in adolescence can have great economic and social consequences. Unprotected sex can lead to unplanned pregnancy and sexually transmitted diseases. The *Healthy New Hampshire 2010* project, regarding reproductive and sexual health, developed five objectives that targeted sexual intercourse, condom use, teen birth, chlamydia infection, and HIV infection. Taken together, these objectives are intended to promote healthy and informed decision-making as it relates to sexuality. New Hampshire generally outperforms the national average on indicators of sexual and reproductive health. This focus area has largely seen improvement since baseline.

- Abstinence among New Hampshire high school students has remained at largely the same level, though it remains more prevalent than the national average.
- The rate of sexually active New Hampshire high school students using condoms has increased, surpassing both the 2010 target and the national average.
- New Hampshire's teen birth rate is the lowest in the nation. The decline since baseline has surpassed the 2010 target.
- Chlamydia infections among adolescents and young adults have increased significantly, but remain below the national average.
- The rate of new HIV infections is a developmental objective, and current state and US data have proved difficult to determine with the measurement as defined.

While multiple goals have already been met at this halfway point in time, others need more attention, better definition, and more insight in order to ensure the reproductive and sexual health of the people of New Hampshire.

11.2 Objective: Increase the percentage of 9th through 12th graders who report never having engaged in sexual intercourse.

Uninformed adolescent engagement in sexual intercourse can pose profound public health threats. In addition to unintended pregnancy and sexually transmitted diseases, individual mental well-being can be jeopardized if the engagement of sexual activity were not accompanied by a mature, healthy understanding of body, mind, and sexuality. Individuals who engage in sexual experiences too early in life bear a greater risk for “multiple partners, STDs [sexually transmitted diseases], and pregnancy.”³⁶²

The percentages of high school students who report never having had sex increased from 1999 to 2005 in both New Hampshire and the United States (0.526 percent increase and 6.4 percent increase, respectively).³⁶³ In New Hampshire during 1999, 57 percent of 9th through 12th graders reported never having engaged in sexual intercourse, as compared to 2005, when 57.3 percent of this age group reported never having engaged in sexual intercourse.³⁶⁴ Nationally, 50 percent of 9th through 12th graders reported never having

engaged in sexual intercourse during 1999. The average nationwide rose to 53.2 percent during 2005.³⁶⁵

The reason behind the mere 0.526 percent growth in the percentage of abstinence in New Hampshire high school students from 1999 to 2005 is unclear. Several factors may have contributed to this lack of progress. One way to stress early abstinence is through parental conversation and observation. A higher quality mother-teen relationship is associated with lower rates of sexual experience before age 18.³⁶⁶ However, the vast majority of New Hampshire teens have never or rarely talked to their mother (55 percent) or father (74 percent) about sexuality.³⁶⁷ In fact, a major driver of early sexual encounters is the perception of fewer costs associated with the behavior with lessened costs including parental disapproval, signifying the limited conversation and perceived parental acceptance of teen sex.³⁶⁸

The data might be interpreted more accurately with closer examination. When broken down by grade levels, the statistics revealed that more students have delayed sex in 2005. Not only are there more students who have not had sex within a particular grade in 2005, the percentage of students who have not had sex decreases with increasing grade level, which means that sexual activity increases with age. When broken down by gender, the data indicate that fewer high school females report never having had sex in 2005 than in 1999 (54.6 percent and 55.5 percent, respectively); whereas more high school males report never having had sex in 2005 than in 1999 (60.3 percent and 59.3 percent, respectively).³⁶⁹

Table 56. Percentage of high school students who report never having engaged in sexual intercourse.

	1999	2005	NH Target 2010
NH	57	57.3	64
US	50	53.2	

Source: *Healthy New Hampshire 2010*; ³⁷⁰ *Youth Risk Behavior Survey*, CDC³⁷¹

11.3 Objective: Increase the percentage of sexually active 9th through 12th graders who report having used a condom during their last sexual intercourse.

Both New Hampshire and the nation as a whole have seen significant leaps in the use of condoms among adolescents. New Hampshire condom use surpassed the goal for 2010 in half of the time allotted. Among sexually active high school students, the state baseline for the use of condoms during the last instance of sexual intercourse was 55 percent, lower than the US baseline of 58 percent that same year.³⁷² Survey data from 2005 indicate that for students who reported having at least one sexual partner in the past 3 months, 64.7 percent used a condom during intercourse.³⁷³ This provides encouraging information that education and outreach efforts are effectively reaching a broader target audience of high school students. As the 2006 *School Health Profiles Report* reveals, 100 percent of senior high schools in New Hampshire required health education for students, with 86 percent requiring one course in health education and 14 percent requiring two or more.³⁷⁴ Furthermore, all high schools required students who failed a

required health education course to repeat the course.³⁷⁵ Also, teachers in 83 percent of high schools in the state presented information to students about how to correctly use a condom as part of a health education course, while an even greater number of schools (96 percent) taught students about the efficacy of condom use.³⁷⁶

These statistics reflect a serious commitment on the part of educators and school districts to providing practical and realistic classroom education about sexual and reproductive health. However, despite being ahead of the country on the proportion of sexually active high school students reporting condom use, New Hampshire still ranks 14th in service availability (defined as meeting existing needs for subsidized contraception) and 28th in public funding of contraceptive services and supplies.³⁷⁷

Table 57. Percentage of sexually active high school students who report having used a condom during last sexual intercourse.

	1999	2005	NH Target 2010
NH	55	64.7	61
US	58	62.8	

Source: *Healthy New Hampshire 2010*; ³⁷⁸ *Healthy Youth, CDC*³⁷⁹

11.4 Objective: Reduce teen births.

Teen births can have negative health, social, and economic impacts on teen mothers and their children. Teen mothers are more likely than women in their twenties to have low birth weight infants, at increased risk for death, blindness, deafness, and mental retardation.³⁸⁰ Furthermore, teen mothers are less likely to complete high school than their peers, thereby jeopardizing their long-term chances for economic success.³⁸¹ *Healthy New Hampshire 2010* therefore sought to reduce the number of teen births per 1000 females aged 15-19 years from 24.0 births in 1999 to 21.1 births in 2010.³⁸²

New Hampshire has already surpassed its target for 2010.³⁸³ The state has been following the general trend of decreasing teen births in the United States. In 1999, the baseline for New Hampshire was 24.0 births per 1000 females between the ages of 15 and 19, in comparison to a 1998 national baseline of 51.1 births per 1,000 females. The birth rate has consistently declined since then, and in 2004, the birth rate in New Hampshire for 15-19 year old females was 18.2 births per 1,000 females, making New Hampshire the state with the lowest teen birth rate in the nation.³⁸⁴

The exact reason behind the decline of teen birth rate in New Hampshire is unclear; however, a plethora of contributing factors should be considered. It is possible that teen birth rates have fallen either because fewer teens are engaging in sexual activity or more adolescents are using contraceptives. More careful scrutiny of the data reveals that the answer is likely both. According to *New Hampshire Youth Risk Behavior Survey* in 1999 and 2005, reported sexual activity among high school students declined slightly between 1999 and 2005 (42.9 percent³⁸⁵ and 42.7 percent,³⁸⁶ respectively). At the same time, condom and oral contraceptive use both increased between 1999 and 2005. The percentage of condom use went from 54.6 percent in 1999³⁸⁷ to 64.7 percent in 2005.³⁸⁸

The percentage of oral contraceptive use grew from 23.7 percent in 1999³⁸⁹ to 28.5 percent in 2005.³⁹⁰

Since the teen birth rate is closely connected to contraceptive availability and proper usage, family planning clinics provide a critical avenue for the dissemination of information and services relating to reproductive and sexual health. There are 35 publicly funded family planning clinics, providing contraceptive care to more than 10,000 sexually active teenagers, with at least one family planning clinic in every county of the state. Federal appropriations in the form of Title X funds of the Public Health Service Act supported 31 family planning clinics in the state, which help avert an estimated 6,500 unwanted pregnancies each year. Publicly funded family planning clinics are a vital component of sexual health efforts in New Hampshire, given that every public dollar used toward family planning services saves federal and state governments three dollars in Medicaid costs for prenatal and newborn care.³⁹¹ Of the teen pregnancies that still occur each year, roughly 37 percent of them result in abortions.³⁹² Thus, the combined effect of family planning centers offering expanded contraceptive availability and the termination of some pregnancies through abortion seems to provide at least a partial account of the overall reduction in the teen birth rate.

Other factors contributing to this significant drop may include education and racial makeup. Health education in New Hampshire repeatedly trumps the national average in all categories under “HIV, STD, and Pregnancy Prevention.”³⁹³ Just over 87 percent of New Hampshire schools taught modes of pregnancy prevention, compared to 84.1 percent nationally.³⁹⁴ The racial makeup of New Hampshire may also play a role. The birthrates for Latina and Black teens nationally are much higher than those of White teens.³⁹⁵ In the 2000 census, New Hampshire was 96 percent White, 0.7 percent Black, and 1.7 percent Latino. As these two groups contribute most significantly to national teen birth rates represent a very small percentage of the New Hampshire population, their absence may be related to the low teen birth rate in the state.³⁹⁶

Table 58. Teen birth rate per 1,000 females 15-19 years of age.

	1998	2004	NH Target 2010
NH	24.0	18.2	21.1
US	51.1	41.1	

Source: *Healthy New Hampshire 2010*;³⁹⁷ *National Vital Statistics Reports*, CDC³⁹⁸

11.5 Objective: Reduce the incidence of chlamydia infection among adolescents and young adults.

Chlamydia is the most common sexually transmitted infection (STI) in the United States,³⁹⁹ and the most common STI under surveillance in New Hampshire. The majority of cases are detected in individuals 15-24 years of age.⁴⁰⁰ Most people do not know they are infected, because they often do not experience symptoms. If left untreated, chlamydia can cause Pelvic Inflammatory Disease (PID) in up to 40 percent of women. PID can cause infertility, ectopic pregnancy, and chronic pelvic pain. Furthermore, women with

chlamydia can be more likely to contract HIV from an infected person.⁴⁰¹ The fourth objective is, thus, to reduce the incidence of chlamydia infection per 100,000 population 15-24 years of age from 528.2 infections in 1999 to 88.5 infections in 2010.⁴⁰²

The New Hampshire rate of chlamydia incidence has increased in recent years, mirroring the national trend. In New Hampshire during 1999, the chlamydia incidence rate was 528.2 infections per 100,000 population 15-24 years of age⁴⁰³ compared to 2005, when the chlamydia incidence rate was 646.4 infections per 100,000 population 15-19 years of age and 928.2 infections per 100,000 population 20-24 years of age.⁴⁰⁴ While the 2006 US chlamydia incidence rate is not available, the New Hampshire rate increased to 648.5 infections per 100,000 population 15-19 years of age and 929.4 infections per 100,000 population 20-24 years of age.⁴⁰⁵ Nationally, the chlamydia incidence rate was 1259.6 infections per 100,000 population 15-24 years of age during 1999. The nationwide number escalated to 1662.4 infections per population in the same age group during 2005.⁴⁰⁶

In New Hampshire in 2005, the rate of chlamydia infection among females was about three times higher than the rate among males (200.1 infections and 77.6 infections per 100,000 population, respectively).⁴⁰⁷ Since reported sexual activity is lower and condom use is higher, the increase in chlamydia incidence rate may reflect the large number of females screened for chlamydia in New Hampshire. Chlamydia testing is provided free or on a sliding fee scale at twenty STD clinics across the state.⁴⁰⁸ It is likely that, due to increased screening of females, the female incidence rate is more accurate than the male incidence rate. However, both rates are likely to be an underestimate of the true incidences of chlamydia infection because of a lack of universal screening for the disease.

Though increases in reported cases and rates likely reflect the continued expansion of screening efforts and increased use of more sensitive diagnostic tests,⁴⁰⁹ this trend may also indicate an actual increase in infections. Education programs that promote sexual abstinence and condom use for the sexually active can be implemented to prevent the spread of chlamydia. New Hampshire schools exceed the national average in the percentage that teach STD prevention, with 94.2 percent including this lesson.⁴¹⁰ Specifically, the use of condoms is the most effective lesson to instill in youths to prevent chlamydia contraction.⁴¹¹

Table 59. Chlamydia incidence rate per 100,000 population 15-24 years of age.

	1999	2006	NH Target 2010
NH	528.2	789*	88.5
US	1259.6	1662.4 (2005)	

Source: *Healthy New Hampshire 2010*;⁴¹² *STD Surveillance, CDC*⁴¹³

*There was no breakdown of Chlamydia infections between the ages of 15-24 for the data provided; therefore, the 15-19 and 20-24 data were averaged.

11.6 Objective: Reduce the number of new cases of HIV infection among adolescents and adults.

Healthy New Hampshire 2010 sought to reduce the number of new cases of HIV infection among adolescents and adults in New Hampshire. New Hampshire and US baselines for this particular objective were not available, and the target for 2010 was developmental, an indication that precise measurements might be difficult to obtain. Much of the data concerning HIV/AIDS collected by the CDC was not applicable to the objective as outlined in *Healthy New Hampshire 2010*. Though all states report AIDS cases, not all states currently track HIV infection. As of 2005, 38 states included HIV as part of their “standardized, confidential name-based reporting system” and sent data to the CDC accordingly.⁴¹⁴ New Hampshire only became one of the 38 states reporting in January of 2005. Regardless, estimates of incidence of HIV infection in New Hampshire are unreliable due to inconsistent reporting methods that result in duplicate accounts.⁴¹⁵ Given the uncertainty and potential inaccuracy with reporting new cases of HIV infection, it is difficult to reach a definitive conclusion about what progress has been made.

Instead of tracking HIV infections, a better indicator may be that of AIDS incidence. AIDS reporting in New Hampshire and the US is comparatively reliable. In 1993, there were 11 cases of AIDS per 100,000 population in New Hampshire,⁴¹⁶ compared to 40.2 cases per 100,000 population nationwide.⁴¹⁷ By 2002, New Hampshire had dropped to 3.1 cases per 100,000 population;⁴¹⁸ the national rate had also dropped precipitously during this time period to 15.3 cases per 100,000 population.⁴¹⁹

Table 60. New cases of HIV infection among adolescents and adults.

	Baseline	Current	NH Target 2010
NH	NA	NA	Developmental
US	NA	NA	

Source: *Healthy New Hampshire 2010*⁴²⁰

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