

2010–2014

NEW HAMPSHIRE COMPREHENSIVE CANCER CONTROL PLAN

For a disease as complicated and far-reaching as cancer, one person,
one team, or even one organization cannot hold all the answers.
But together, our potential is boundless.



The New Hampshire Comprehensive Cancer Collaboration
brings together knowledge and resources to address cancer statewide.



Dedication

To those who have been touched by cancer,
To those who have known the fear and
confusion of a diagnosis of cancer,
The discomfort and exhaustion of treatment,
The uncertainty of survivorship,
And the pain and grief of losing a loved one
to this disease—
We dedicate this cancer plan to you.



New Hampshire
C O M P R E H E N S I V E
C A N C E R
C O L L A B O R A T I O N

New Hampshire Comprehensive Cancer Control Plan 2010–2014
New Hampshire Comprehensive Cancer Collaboration

LETTER FROM THE GOVERNOR



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March 31, 2010

Dear Friends:

Every day in New Hampshire, 19 residents are diagnosed with cancer and seven of them die. Whether it is a friend, neighbor, co-worker or family member who has faced a cancer diagnosis and undergone the rigors of treatment, cancer is a disease that touches all of us.

While the extent of this disease is staggering, there is good reason for continued hope. I am proud of the innovative efforts across New Hampshire aimed at preventing cancer and of the growing collaboration between cancer professionals and organizations. Across our state, new approaches to diagnose and treat cancer are being implemented. Granite State survivors have access to a greater range of care and services to help them on their road to recovery.

Through the New Hampshire Comprehensive Cancer Collaboration (NH CCC), significant strides are being made to reduce the impact of cancer on New Hampshire's residents, families, employers and the economy.

This updated plan outlines the ongoing steps we can take to fight against cancer, including a continuing emphasis on prevention and early detection. We should all review and consider its recommendations carefully to ensure a public discussion about strategies for preventing cancer.

I look forward to continuing to work with the NH CCC members, and I urge all Granite Staters to play a role in reducing cancer in our state.

Sincerely,


John H. Lynch
Governor

CONTENTS

Introduction	1
Progress Report for 2005–2009	2
Objectives for 2010–2014: A Summary	6
The Cancer Burden in New Hampshire	9
Geography and Demographics	10
Morbidity and Mortality	10
Targeted Cancer Sites	12
Cancer Prevention and Control Challenges in New Hampshire	18
Priorities, Goals, Objectives, and Strategies Along the Continuum of Care	21
Primary Prevention	21
Prevention and Early Detection	28
Treatment and Survivorship	33
Palliation	35
Emerging Issues	37
References and Resources	39
Glossary of Terms	39
Index of Abbreviations	41
SEER Summary Staging	42
Data Sources	43
Cancer Prevention and Screening Guideline Sources	43
NH CCC Members	44
2009–2010 NH CCC Board of Directors	44
Board of Directors Alumni	45
NH CCC Work Group Chairs	45
Citations	46

We welcome you to the *New Hampshire Comprehensive Cancer Control Plan 2010–2014* and hope you will join us as we continue to influence, drive, and shape cancer policy in New Hampshire.

Introduction

Now is a crucial time for cancer care in New Hampshire.

In 2008, cancer was the Granite State's leading cause of death, resulting in an overall statewide cost of a staggering \$1.1 billion that year.¹ In addition, New Hampshire's cancer incidence rates were higher than national levels in 2006 (the most recent year for national data when this plan was being developed).¹

The New Hampshire Comprehensive Cancer Collaboration (NH CCC) is a dedicated group of more than 200 individuals and community partners that has established the key goals of reducing the state's cancer incidence and mortality rates. Building from the successes of the NH CCC's original statewide plan *Cancer in New Hampshire: A Call to Action 2010* (see pages 2–5), the *New Hampshire Comprehensive Cancer Control Plan 2010–2014* aims to bring additional achievements to each part of the cancer continuum: primary prevention, prevention and early detection, treatment and survivorship, palliation, and emerging issues.





PROGRESS REPORT FOR 2005–2009

At the NH CCC, our members do not shy away from ambitious goals. Instead, we embrace them.

By designing activities that address the objectives laid out in our original plan (released in 2005), our work groups have achieved significant and focused results. Here is a look at some of these accomplishments.

Primary Prevention Work Group

- Assisted in the passing of Senate Bill 42, an amended version of the *New Hampshire Indoor Smoking Act*. This amendment specifies that smoking be prohibited in “restaurants, cocktail lounges, and certain enclosed public places in New Hampshire.”
- Supported an increase in the cost of tobacco products, resulting in a 2009 tax rate of \$1.78 per pack of 20 cigarettes. The 2009 tax rate of all other tobacco products, except premium cigars, increased to 48.59% of the wholesale price.
- Awarded a minigrant to the White Mountain Regional School District (WMRSD) to implement a school-based nutrition initiative: *Making the Healthy Choice, the Easy Choice*. As a result, the district now has greater access to healthy foods as well as education materials that help students and faculty make healthy lifestyle choices. This project resulted in a 50% increase in the number of available foods with a high nutritional value within the WMRSD school environment, the completion and distribution of 200 wellness toolkits, and the support to fund a health and wellness coordinator position for the district.
- Developed a partnership with the Healthy Eating Active Living (HEAL) New Hampshire initiative. Representatives from the primary prevention work group participate on the HEAL NH Communications Committee.
- Supported the New Hampshire Obesity Prevention Program, which received Centers for Disease Control and Prevention (CDC) funding through the New Hampshire Department of Health and Human Services (DHHS), Division of Public Health Services (DPHS). The program is designed to work with statewide partners to implement the HEAL action plan, support participating communities, and evaluate progress.

Prevention and Early Detection Work Group

- Collaborated in the successful application for a \$3.5 million cooperative agreement awarded in 2009 to Dartmouth-Hitchcock Medical Center (DHMC) to address colorectal cancer screening. The New Hampshire Colorectal Cancer Screening Program (NHCRCSP) will use one-third of the cooperative agreement to provide screenings; two-thirds will be used to increase to 80% colorectal-cancer-screening rates for all individuals older than age 50. DHMC and the NH CCC will work closely on this project, which is being led by the principal investigator, Dr. Lynn Butterly (former NH CCC chair), and the project manager, Joanne Gersten (former co-chair of the prevention and early detection work group).
- Increased percent of adults age 50 and older who are screened for colorectal cancer using sigmoidoscopy or colonoscopy to 71.7% (the original goal was 70%) from a baseline of 62.2%.
- Provided an NH CCC minigrant to DHMC that partially funded the development of the New Hampshire Colonoscopy Registry (NHCR). A National Institutes of Health (NIH) grant project, the NHCR collects information about colonoscopies in New Hampshire with the goal of improving the understanding of best practices for the use of colonoscopies in the prevention and early detection of colorectal cancer.
- Funded by grants from the NH CCC, the American Cancer Society (ACS), Harvard Pilgrim Health Care, Concord Hospital, and Capital Region Health Care (CRHC) in Concord embarked on a multidisciplinary initiative in 2005 to increase raise the rate of colorectal cancer screening in Merrimack County for patients who received their primary care from Concord Hospital affiliated providers.
- Worked with the Division of Public Health Services (NH DPHS)/Office of Health Statistics and Data Management (HSDM) to include new questions about colon and prostate cancer on the New Hampshire Behavioral Risk Factor Surveillance System (BRFSS).
- Worked with advocates for prostate cancer awareness to help foster the development of the New Hampshire Prostate Cancer Coalition (NHPCC). This organization engages in awareness-building media campaigns, provides leadership and guidance to prostate cancer support groups across the state, publishes a monthly newsletter that reaches more than 300 readers, and has developed public service announcements that appeared on 35 local TV channels.

See All We Have Accomplished

The NH CCC's website—www.NHCancerPlan.org—contains detailed information about each of our work groups, their activities, and their accomplishments. To learn more about what we have completed and where we are going, click on the *Work Groups* tab.

Treatment and Survivorship Work Group

- Identified existing cancer treatment and survivorship resources from organizations such as the ACS, the National Cancer Institute (NCI), Blue Cross and Blue Shield, the Lance Armstrong Foundation, and the Cancer Advocates Coalition.
- Supported a successful grant proposal to fund a project that identified unmet needs of cancer survivors through a web-based survey tool.
- Identified New Hampshire facilities that provide cancer treatment and conduct clinical trials.
- Published the 2008 report *Barriers to Participation in Cancer Clinical Trials in New Hampshire*, which details the

barriers to clinical trials that were identified by an assessment tool and survey developed by the NH CCC.

- Supported and participated in a clinical-trial educational program for oncology nurses and health professionals.
- Arranged for Stephen Kiernan, author of *Last Rights: Rescuing the End of Life from the Medical System*, to speak to healthcare professionals and the public on how to improve the end-of-life experience.
- Conducted educational programs and developed materials explaining New Hampshire Statute RSA-137J, which addresses advanced-care directives and do-not-resuscitate decisions.

Palliation Work Group

- Worked with the New Hampshire Hospice and Palliative Care Organization (NHHPCO) and the Foundation for Healthy Communities to conduct the first statewide survey of hospital-based palliative-care services.
- Partnered with the NHHPCO, which was working with the New Hampshire Pain Initiative (NHPI) and Senior Moments (a group of seniors who perform plays throughout the state), to present *I Haven't Got Time for the Pain*, a series of skits dealing with chronic pain and issues surrounding pain specifically related to the senior population.
- Coordinated statewide presentations on end-of-life care.
- Included presentations on palliative care and pain management at the 13th and 14th annual NHHPCO conferences.

As the momentum and organizational force of the NH CCC, these work groups develop and implement projects that are directly linked to our identified objectives.



- Worked with the NHHPCO to implement courses that will recertify licensed nursing assistants and registered nurses in hospice care.
- Identified advocates to promote access to high-quality pain management for cancer survivors.
- Developed and distributed the brochure *Freedom from Pain*, which recommends approaches for patients as they advocate for better pain management.

Emerging Issues Work Group

- Produced the 2008 literature review *Emerging Issues: Cancer in New Hampshire*, which identified recent scientific studies that are relevant to New Hampshire populations for the four focus areas of the comprehensive cancer control plan (primary prevention, prevention and early detection, treatment and survivorship, and palliation).
- Developed an issue brief, “D” for Cancer? *Sunshine Vitamin May Play a Role in Prevention and Treatment*, to clarify findings that vitamin D may be linked to cancer development levels.
- Wrote the 2009 issue brief *Sound Science: Important Questions to Ask When Interpreting and Evaluating Research Studies*.

In 2008, the direct cost of medical care for New Hampshire cancer survivors was \$421.8 million, according to the New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management. (For information on the methodology used, see page 47.)



OBJECTIVES FOR 2010–2014: A SUMMARY

One goal of the NH CCC is to continue to influence, drive, and shape cancer policy in New Hampshire. Going forward, we have developed the following objectives for the years 2010–2014, based on achieved goals, recent research, developments in the healthcare field, and relevant data.

Primary Prevention

1. Decrease the percent of New Hampshire high school youth who report first using cigarettes before the age of 13 to 8.5%.
2. Decrease the percent of New Hampshire adults who report currently smoking cigarettes to 14%, using smokeless tobacco to 1.5%, and smoking cigars to 4%.
3. Increase the percent of adults in New Hampshire who report they are free from exposure to secondhand smoke in the workplace to 100%, in the home to 85%, and in the car to 85%.
4. Increase the percent of high school youth in New Hampshire who report they are free from exposure to secondhand smoke indoors to 75% and in a car to 100%.
5. Reduce the average annual increase in prevalence of overweight and obese adults to 0%.
6. Reduce the average biennial increase in the percent of overweight and obese youth to 0%.
7. Increase the percent of adults who report regularly engaging in moderate or vigorous physical activity to 57% and 33%, respectively.
8. Increase the percent of youth who report being physically active at least 60 minutes per day on five or more of the past seven days to 49%.
9. Reduce the percent of youth who report watching three or more hours of television per day to 23%.
10. Increase the percent of adults who report eating fruits and vegetables five or more times per day to 30%.
11. Increase the percent of youth who report eating fruits and vegetables five or more times per day to 24%.
12. Reduce the percent of youth who report drinking a sugar-sweetened beverage one or more times a day to 22%.
13. Increase the percent of mothers who report exclusively breastfeeding their infants at three months and at six months to 40% and 17%, respectively.
14. Reduce the percent of adults who report having had a sunburn in the past year to 38%.
15. Promote the strengthening of state regulations concerning youth and indoor tanning facilities.
16. Promote state-of-the-art diagnostic procedures for melanoma to New Hampshire healthcare providers.

For more information about these objectives, including baselines and strategies, see the section *Priorities, Goals, Objectives, and Strategies along the Continuum of Care* beginning on page 21.

Prevention and Early Detection

17. Increase the percent of adults age 50 and older who report being screened for colorectal cancer to 80%.
18. Decrease the percent of distant and regional staged colorectal cancer to 35%.
19. Increase the percent of women age 40 and older in the lowest income and education levels who currently report receiving recommended breast cancer screenings to 68% and 69%, respectively.
20. Increase the percent of women between the ages of 18 and 69 who report having had a Pap test in the previous three years to 91.1%.
21. Increase the percent of women at the lowest income and education levels who report having had a Pap test in the previous three years.
22. Increase the number of men age 40 and older who report having discussed prostate cancer screening with their healthcare providers (in other words, those who have made an informed decision about the screening) to 73%.

Treatment and Survivorship

23. Disseminate information about existing and evolving survivorship resources to 50% of targeted New Hampshire healthcare providers and a majority of survivors.
24. Increase the use of survivorship care plans by 50% among providers working with cancer survivors.
25. Disseminate consumer-oriented, clinical-trial information to the general public.
26. Increase provider awareness of clinical trials.

Palliation

27. Increase the participation of hospitals providing palliative-care services to cancer survivors to 90%.
28. Establish a baseline of how cancer survivors access information about palliative care.
29. Increase the proportion of New Hampshire cancer-care settings that have adopted evidence-based assessment and symptom management by a minimum of 5%.

Emerging Issues

30. Identify four emerging issues within the continuum of cancer annually.
31. Develop materials for each emerging issue to translate the information and make it accessible to targeted audiences.
32. Each quarter, disseminate the information about one issue to targeted audiences.
33. Monitor the identified emerging issues until scientific consensus is reached.

How You Can Help

Share your expertise by joining a work group and helping achieve these objectives.

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Joining the New Hampshire Comprehensive Cancer Collaboration

It is the breadth of our membership that will allow us to achieve our objectives. Regardless of your role in the fight against cancer—healthcare professional, social services coordinator, insurance representative, hospital administrator, advocate, public health leader, cancer survivor, family member, or friend—your skills and knowledge are vital to the NH CCC.

To learn what you can contribute to the fight against cancer in New Hampshire, contact us at:

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Website: www.NHCancerPlan.org

VISION STATEMENT

The vision of the NH CCC is for cancer incidence, morbidity, and mortality to be significantly reduced or completely eliminated and for the people of New Hampshire to enjoy a healthy quality of life.

MISSION STATEMENT

The mission of the NH CCC is to significantly reduce the incidence of, suffering from, and mortality due to cancer for people in New Hampshire through prevention, early detection, treatment and survivorship, and palliation. We will accomplish this goal by means of an integrated and coordinated alliance of stakeholders that will utilize available epidemiological data and evidence-based research to set priorities for action.

THE CANCER BURDEN IN NEW HAMPSHIRE

With approximately 7,000 new cases and 2,600 deaths each year, cancer is the leading cause of death in New Hampshire.² In addition, 2009 estimates indicate that more than 40% of the United States' population, approximately one in two men and one in three women, will develop cancer at some point in their lives.³



Figure 1

Causes of Death in New Hampshire 2006

Cause of Death	Percent Affected
Cancer	25.2%
Diseases of the heart	24.9%
Others	22.6%
Chronic lower respiratory diseases	6.0%
Cerebrovascular diseases	4.9%
Accidents	4.6%
Alzheimers disease	3.7%
Diabetes mellitus	2.9%
Influenza and pneumonia	2.1%
Nephritis, nephrotic syndrome, and nephrosis	1.6%
Intentional self-harm (suicide)	1.5%

Data Source: CDC/National Center for Health Statistics, National Vital Statistics System

Treating cancer presents many challenges because:

- Cancer is a group of more than 100 different diseases;
- Cancer cells often multiply in an uncontrolled, abnormal manner, and (in some cases) can spread to other parts of the body; and
- The detection, diagnosis, and treatment of cancer are often complicated by as yet undiscovered characteristics of the disease.^{4,5}

Nearly two-thirds of cancer deaths in the United States can be linked to behaviors that can be avoided or changed, such as tobacco use, poor nutrition, obesity, and lack of exercise.⁶ However, the remaining one-third of cancer deaths is due to a combination of unknown causes and known risk factors that are difficult or impossible to change, such as:

The National Cancer Institute estimates that between 50% and 75% of cancer deaths in the United States can be prevented through lifestyle choices. ***In New Hampshire, that could mean nearly 2,000 fewer deaths each year.*** (For information on the methodology used, see page 47.)

- Exposure to occupational and environmental carcinogens;
- A family history of cancer;
- Exposure to viruses/other biologic agents;
- Hormonal factors; and
- Perinatal and prenatal exposures.^{7,8}

In the next pages, we look at New Hampshire's population and cancer statistics. The objectives and strategies developed by the NH CCC's work groups and outlined in the section *Priorities, Goals, Objectives, and Strategies along the Continuum of Care* (beginning on page 21) were based on this information.

Geography and Demographics

By 2008, New Hampshire's population had grown to more than 1.3 million people, 7% more than in 2000.⁹ Most of the population lives in urban areas that are located in the southern part of the state, while the rest of New Hampshire residents live in rural areas.

Based on U.S. Census Bureau estimates in 2008, New Hampshire's population is primarily white (96%),¹⁰ with a slowly growing nonwhite population. The 2005–2007 American Community Survey estimates the population of nonwhite citizens in Manchester (the state's largest city) is more than 10%, a significant increase from prior years, while the state's white population has seen the smallest growth.⁹ In fact, there has been:

- An increase of more than 60% in the state's population of Hispanics between 2000 and 2008. This population represents the largest and fastest-growing minority in both New Hampshire and the nation;
- A 53% increase between 2000 and 2007 in New Hampshire's Asian population, the second-largest minority in the state; and
- An increase of more than 60% in the state's African American population between 2000 and 2007.⁹

Despite this growth, minority groups make up a small proportion of the state's population. Given this ratio, this plan compares New Hampshire mortality and incidence rates to the national rates of the white population.

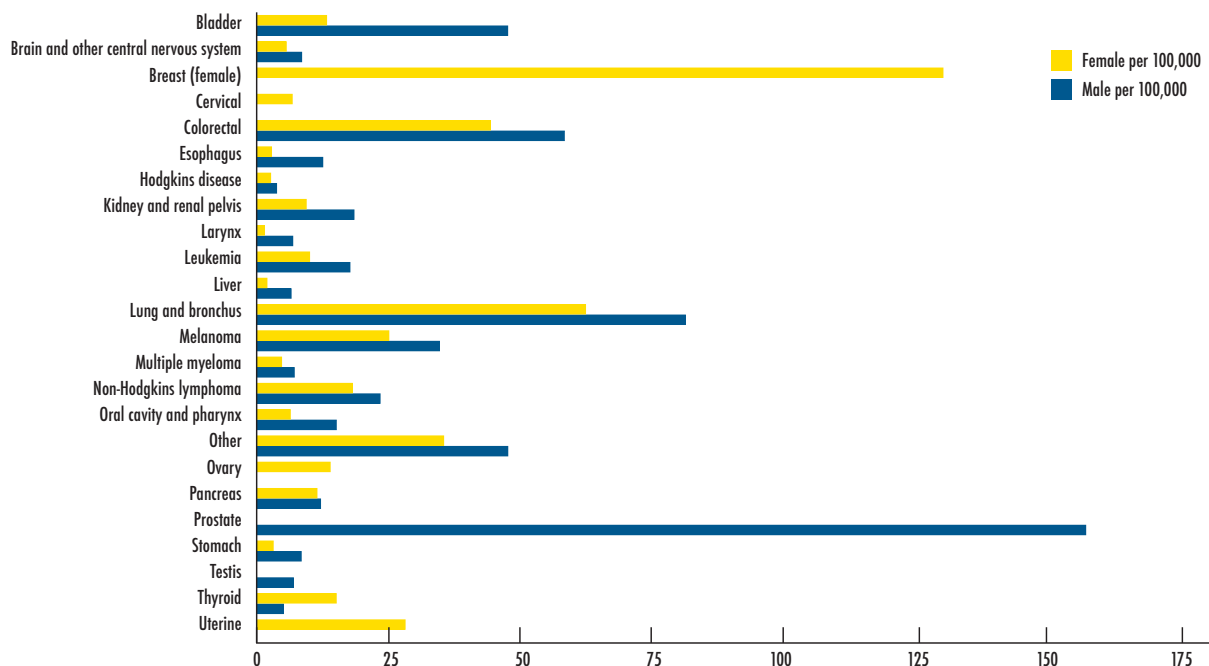
Like the rest of the nation, the population in New Hampshire is aging. In 2007, seniors (those age 65 and older) accounted for 12% of the state's population, and 57% of seniors were female.¹¹ As populations in New Hampshire and the nation age, the risk of cancer increases. This is reflected in the fact that approximately 86% of newly diagnosed cancers in New Hampshire are among people 50 years old and older.¹

Morbidity and Mortality

The overall cancer incidence rate in New Hampshire in 2006 was significantly higher than the national rate for both males and females.¹ During 2006, 557 New Hampshire males and 439 New Hampshire females (per 100,000 population) were diagnosed with cancer.¹ The national rates were 530 males and 418 females per 100,000.⁶

Figure 2

Age-Adjusted Cancer Incidence Rates for All Ages in New Hampshire, 2002–2006

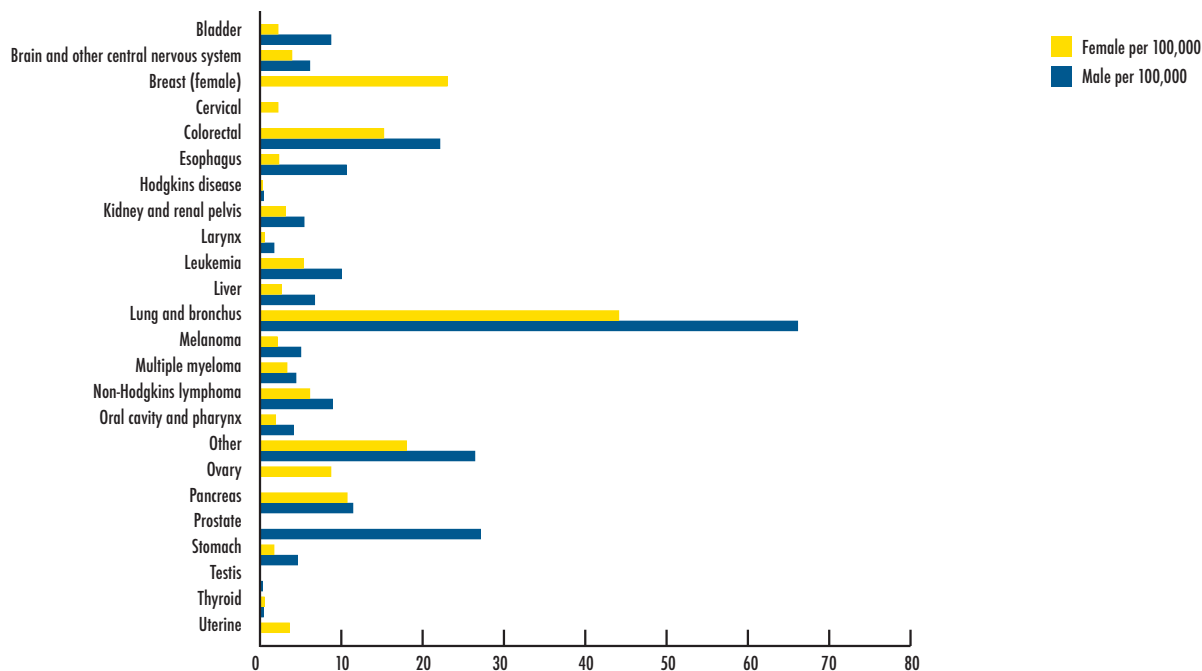


Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

Although cancer death rates among New Hampshire males were higher than those among New Hampshire females, when compared with the national figures, the Granite State had lower mortality rates for both genders. Nationally, 223 males per 100,000 died from cancer, compared with 193 in New Hampshire in 2006.^{3,7,8} For females, the national rate was 155 per 100,000, compared with 141 in New Hampshire in the same year.^{3,7,8}

Figure 3

Age-Adjusted Cancer Mortality Rates for All Ages in New Hampshire, 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

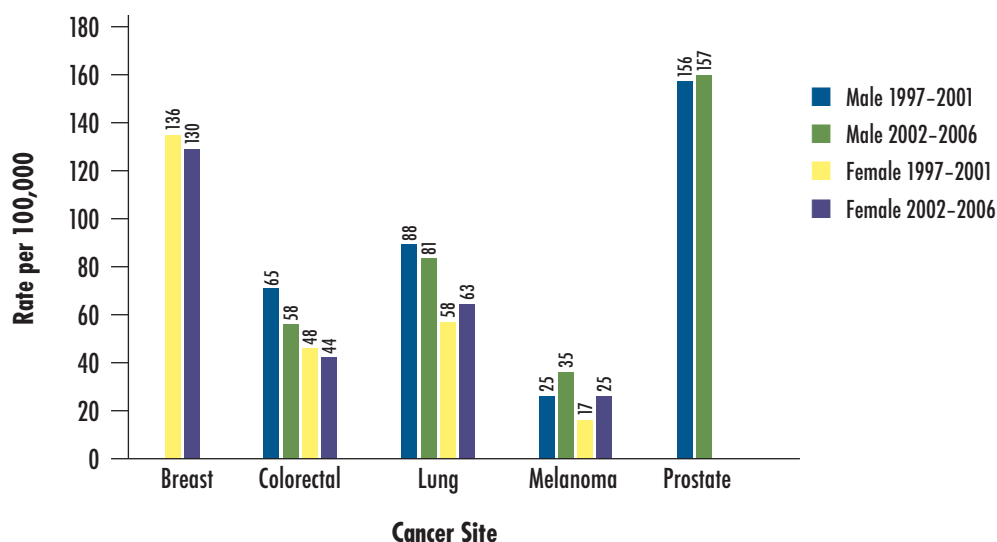
For the years 2002–2006, lung, colorectal, breast, prostate, and skin cancer accounted for almost 52% of cancer diagnoses and 56% of cancer deaths in New Hampshire.^{1,3}

Targeted Cancer Sites

Since the publication of the original statewide cancer plan, *Cancer in New Hampshire: A Call to Action 2010*, the NH CCC has focused on the five cancers in the Granite State with the highest incidence and mortality rates: lung, colorectal, breast, prostate, and skin cancer. Figures 4 and 5 illustrate the incidence and mortality rates from the leading types of cancer for both genders.

Figure 4

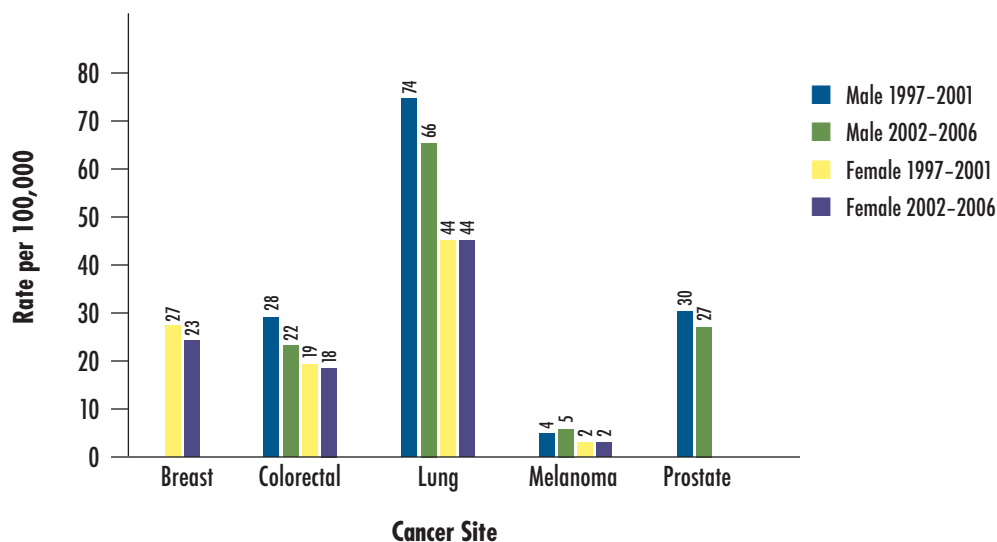
NH Incidence Age-Adjusted Rate, 1997–2001 and 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

Figure 5

NH Mortality Age-Adjusted Rate, 1997–2001 and 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

Although mortality rates are declining for some cancers, further reductions are possible through better nutrition, increased physical activity levels, obesity prevention, tobacco-use cessation, and reduced exposure to environmental hazards, such as excess ultraviolet light and radon gas. In addition, successful screening and early detection programs can make an important difference in cancer prevention and outcomes, particularly for colorectal and breast cancers. This section looks in detail at lung, colorectal, breast, prostate, and skin cancers as well as how New Hampshire compares with the nation.

Lung Cancer

Lung cancer is the leading cause of cancer deaths in the nation, with mortality rates higher than breast, colon, and prostate cancers combined.³ The incidence rate for 2002–2006 for lung cancer among males and females in New Hampshire (70 per 100,000) was higher than the national rate (64 per 100,000).^{1,6}

By the time of diagnosis, lung cancer has often spread. During 2002–2006, 47% of lung cancer cases in New Hampshire were diagnosed at the distant stage.¹ Unfortunately, no effective screening test currently exists.

Cancer is second only to heart disease as the leading cause of death nationwide.²

Figure 6

NH Cases of Lung Cancer by Stage, 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

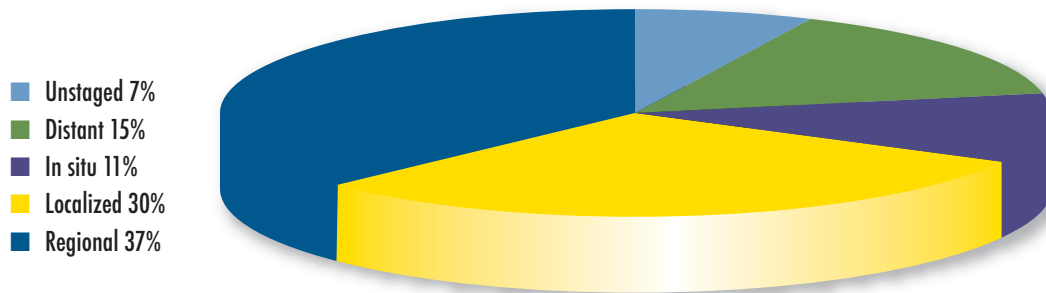
Colorectal Cancer

Although colorectal cancer is the second most commonly diagnosed cancer in the combined male/female population in New Hampshire,¹ it is one cancer that can be prevented through screening. The small growths or polyps from which most colon cancers develop can be detected during the screening process and removed during a colonoscopy.

The increased number of colorectal cancers being diagnosed in New Hampshire at the in situ or localized stages (as illustrated in Figures 7 and 8) suggests that screening rates in the Granite State for 2002–2006 may have improved from the rates in 1997–2001.¹

Figure 7

NH Cases of Colorectal Cancer by Stage, 1997–2001



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

Figure 8

NH Cases of Colorectal Cancer by Stage, 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

In 2008, New Hampshire ranked 4th nationally (with 1 being the best of 50) for adults age 50 and older who reported that they had a home stool-blood test in the past year, or a sigmoidoscopy or colonoscopy in the past 10 years. Sigmoidoscopy and colonoscopy both use a lighted tube that can directly examine the lining of the colon; colonoscopy allows for removal of polyps (small, potentially pre-cancerous growths) during the test.¹² The fecal occult blood test (FOBT) is a low-cost home test that should be done annually.¹³

Despite increasing colon cancer screening rates, New Hampshire ranked 28th in the nation in 2006 for diagnoses of invasive colorectal cancer in males and 21st for male deaths.¹⁴ For the same year, New Hampshire females ranked 25th for incidence and 8th for death rates.¹⁴ The New Hampshire incidence and mortality rates of colorectal cancer between 2002 and 2006, for both sexes, were not significantly different than the national rates.^{1,6} The stage at diagnosis did not significantly differ between males and females in New Hampshire in 2006.

Breast Cancer

Breast cancer is the most frequently diagnosed cancer among women in New Hampshire and in the United States. In 2006, New Hampshire women had the 6th-highest rate of invasive breast cancer incidence in the country and ranked 22nd for breast cancer mortality.

Although these rates still are higher than the national rates, they represent a significant decrease for New Hampshire from the 1997–2001 incidence rate of 137 per 100,000 females. The New Hampshire incidence rate for 2002–2006 decreased to 130 per 100,000.

In 2008, the statewide cost of lost productivity due to cancer treatment and premature death reached \$567.3 million, according to the New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management. (For information on the methodology used, see page 47.)

Figure 9

NH Cases of Breast Cancer by Stage, 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

Because breast cancer is treatable when detected early, screening is an invaluable tool. This is clearly evident in the comparison between the survival rates of breast cancers that are diagnosed at a localized stage versus the distant stage. Between 2002 and 2006, 50% of breast cancers in New Hampshire were diagnosed at a localized stage, where the five-year survival rate is 97.5%.¹⁵

According to the 2008 NH BRFSS, 83% of all New Hampshire women age 40 and older reported that they had a mammogram in the past two years. Nationally, New Hampshire ranked 14th for women who reported that they had a mammogram and 5th for women age 40 and older who reported that they had a clinical breast exam in the past two years.¹²

When the New Hampshire numbers are broken down by income and education level, clear disparities emerge. While nearly 90% of New Hampshire women age 40 and older in the highest income and education levels reported that they had mammograms in the past two years, that percent drops to 66% in the lowest income level and 67% at the lowest education level. In the years 2002 through 2008, mammography rates for New Hampshire women in the lower income and education levels either decreased or remained the same, while mammography rates for New Hampshire women at the highest income or education level increased.¹⁶

Prostate Cancer

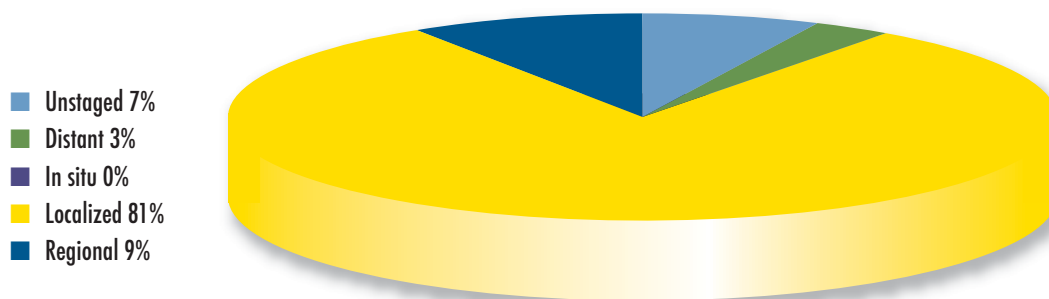
Prostate cancer is the most common cancer detected in men nationwide. New Hampshire ranked 14th highest in prostate cancer incidence but 17th lowest in prostate cancer mortality in the nation.¹² In the period 2002 through 2006, the state's prostate cancer incidence and death rates (157 and 27 per 100,000 males, respectively) were very similar to the national rates (153 and 25 per 100,000 males, respectively).^{3,7,8}

During this five-year period, 81% of prostate cancer diagnoses were made at the localized stage in New Hampshire.¹ According to the 2008 NH BRFSS, 55% of New Hampshire men age 40 and older reported that they had a prostate-specific antigen (PSA) test in the past two years.¹⁷

According to the 2008 NH BRFSS, 69% of New Hampshire males age 40 and older reported that they had ever discussed prostate screening with their healthcare provider and 67% of those reported having the discussion in the past year.

Figure 10

NH Cases of Prostate Cancer by Stage, 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

Skin Cancer (Melanoma)

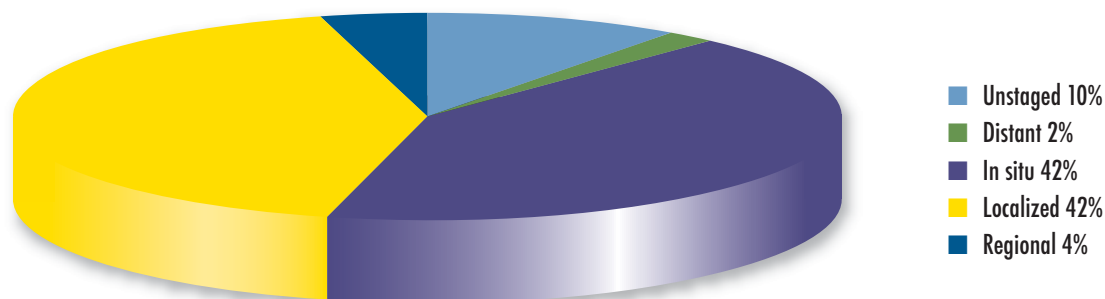
In 2005, New Hampshire ranked 2nd highest in the nation for incidence and 17th highest for deaths due to melanoma.¹⁸

Although there are several types of skin cancer, nearly 77% of the skin cancer deaths in the United States in 2005 were due to melanoma.¹⁸ The New Hampshire incidence rate of melanoma for males was higher than that for females (35 per 100,000 males compared with 25 per 100,000 females); these figures also were higher than the national rates for males and females.^{6,1} For 2002–2006, the New Hampshire melanoma mortality rate for males was 5 per 100,000, compared with 4 per 100,000 nationally. The New Hampshire female mortality rate was 2 per 100,000, the same as the rate for the national female population.^{3,7,8}

During 2002–2006, more skin melanomas (42%) were diagnosed at the in situ stage than in 1997–2001 (32%).¹ This is significant because when detected and treated early, melanoma is highly curable. The five- and ten-year relative survival rates for people with melanoma diagnosed at the in situ stage are 91% and 89%, respectively.¹⁵

Figure 11

NH Cases of Melanoma Cancer by Stage, 2002–2006



Data Source: New Hampshire Department of Health and Human Services, Office of Health Statistics and Data Management

Cancer Prevention and Control Challenges in New Hampshire

NCI has identified four categories of risk factors for cancer: environmental, biological, genetic, and behavioral. This section looks at how some of these risk factors affect New Hampshire's population.

Geography

New Hampshire's rural population faces a variety of issues that can present barriers to accessing appropriate healthcare; the mountainous terrain, challenges of distance, and the need for transportation are just three examples. In addition, the health and well-being of New Hampshire's rural population are significantly affected by issues of aging, poverty, lack of education, a lower per capita income,¹⁹ and lack of insurance.

Population Diversity

As the population of New Hampshire becomes more diverse, there is a corresponding growth in the complexity of related healthcare issues. In addition to cultural and language barriers associated with a diverse population, cancer affects various racial and ethnic groups differently.

For example, cancer incidence and mortality rates for lung, colon, prostate, and cervical cancers are higher among African Americans than whites.²⁰ In addition, African Americans have a lower five-year survival rate than whites, due in part to the lower rate of African Americans receiving a diagnosis at an early stage.

Hispanics have higher incidence and mortality rates of stomach, liver, and uterine cancer than whites.²¹ Finally, Asian Americans have higher rates of cervix, stomach, and liver cancers.²²

Tobacco Use

Tobacco use is the single-largest preventable cause of disease and premature death in the United States.¹⁵ Smoking is a risk factor for cardiovascular and respiratory diseases as well as many cancers. Among them are cancer of the mouth, lips, larynx, pharynx, esophagus, pancreas, uterine cervix, bladder, and kidney.¹⁵ Additionally, tobacco use is the leading risk factor for cancer in both men and women. The ACS estimates that 30% of cancer deaths and approximately 87% of lung cancer deaths in the United States each year are associated with the use of tobacco products.¹⁵

In New Hampshire, according to the results of the 2008 NH BRFSS, approximately 17% of adults were current cigarette smokers; this proportion was similar in males and females. Nationally, New Hampshire ranked 16th from the bottom for tobacco use.¹²

Tobacco use is not limited to New Hampshire adults. In 2007, 20% of New Hampshire high schoolers reported current cigarette use. There is evidence that use of other tobacco products has increased in the past 14 years. Cigars are the most common alternative tobacco product used by New Hampshire high school students, and more high schoolers reported using chewing tobacco in 2007 (7%) than in 2001 (5%).²³

In New Hampshire, the greatest increase in youth cigarette smoking was seen between grades eight and nine, which often represents the transition from middle to high school. While smoking rates continue to increase among 9th through 12th graders, the increase slows during the high school years.²³

Obesity, Nutrition, and Physical Activity

New Hampshire, along with the rest of the nation, is experiencing an epidemic of obesity. For more than 20 years, the percent of children and adults who are overweight or obese has increased. In 2008, nearly one out of every four adults and one out of every nine teens in the Granite State were considered obese.²⁴

A key way to prevent obesity and decrease risk for cancer, especially breast cancer and colon cancers,²⁵ is through daily physical activity. In New Hampshire, physical activity rates for adults and children are higher than national rates. In 2008, approximately 54% of New Hampshire adults and 47% of New Hampshire youth reported that their physical-activity rates met physical-activity guidelines. However, 22% of New Hampshire adults reported not participating in any physical activities in the past month and 25% of New Hampshire youth reported watching three or more hours of television each day.²⁶

A well-balanced, nutrient-dense diet will help lower obesity levels. According to the 2007 NH BRFSS and the 2007 New Hampshire Youth Risk Behavior Survey (NH YRBS), only 29% of New Hampshire adults and 22% of New Hampshire youth reported eating fruits and vegetables five or more times a day.^{27,28} At the same time, the reported consumption of sugar-sweetened beverages (associated with weight gain and increased risk for type 2 diabetes) was increasing. Approximately 24% of New Hampshire youth reported drinking at least one nondiet soda each day, according to the 2007 NH YRBS.

Good nutrition begins at birth. There is substantial evidence that both mother and child benefit from breastfeeding, which may act as a protective factor from babies becoming overweight or obese in the future. For mothers, there is even stronger evidence that breastfeeding reduces the risk for premenopausal and postmenopausal breast cancer.²⁹

While genetics and our environment certainly play a role in our overall health, making positive lifestyle choices and getting recommended medical care can help us all live healthier lives.



ABOUT THE DATA

The data used in the section *The Cancer Burden in New Hampshire* was developed using the following methods. More detailed information is also included in the *Data Sources* section on page 43.

Age-Adjusted Rates

All rates in this document are age-adjusted to the 2000 United States standard population. This allows the comparison of rates among populations that have different age distributions. Age-adjusted rates refer to the number of events that would be expected per 100,000 persons in a selected population if that population had the same age distribution as a standard population.

Confidence Intervals

A *confidence interval* is a range of values within which the true value is expected to fall. Confidence intervals can be used to evaluate statistical significance. If the confidence intervals of two groups (such as the populations of New Hampshire and the United States) do not overlap, then the difference between the two rates is statistically significant. All rates in this report are calculated at a 95% confidence level.

Data Collection

The New Hampshire State Cancer Registry (NHSCR) is administered under the state statute Title X Chapter 141-B, Part He-P 304. Physicians and hospitals are required to report information on all cases of cancer they diagnose or treat, with the exception of squamous cell and basal cell carcinomas of the skin; benign neoplasms (except brain); and in situ carcinomas of the cervix or skin. The information for New Hampshire residents diagnosed or treated in other states is included.

Data Confidentiality

All individuals working with NHSCR data are governed by the confidentiality policy implemented under the specific New Hampshire rules and regulations. Release of confidential cancer data for research or other purposes is governed by RSA 141B. The law permits disclosure of certain confidential data to other cancer registries and federal cancer control agencies. However, strict requirements, including prior approval of the researcher's proposal with the Institutional Review Board for the Protection of Human Subjects, must be met. Public data releases, such as published statistical reports, are designed to provide data to the fullest extent possible while still realizing the mandate to protect patient confidentiality.

Graphs

Graphs have varying scales depending on the range of the data displayed. Therefore, caution should be exercised when comparing such graphs.

New Hampshire–United States Comparison

United States incidence and mortality rates for whites, rather than those for all races, are used for comparison because racial minority groups were estimated to make up approximately 4% of the total New Hampshire population, compared with the total United States nonwhite population of 25% in 2005, as reported by the American Community Survey.⁹

United States Incidence Rates

The NCI funds a network of Surveillance, Epidemiology and End Results (SEER) registries. Since its inception in the 1970s, the SEER Program has been collecting and publishing cancer incidence and survival data from 17 population-based cancer registries and 3 supplemental registries, covering approximately 26% of the United States' population. These rates are used to estimate United States cancer-incidence rates. The United States' incidence is based on the SEER 17 registries' white rates.

United States Mortality Rates

Mortality rates presented in this report are for the United States white population and were obtained using the CDC's Wide-ranging Online Data for Epidemiologic Research (WONDER) system and the *SEER Cancer Statistics Review* (CSR), 1975–2006.

PRIORITIES, GOALS, OBJECTIVES, AND STRATEGIES ALONG THE CONTINUUM OF CARE

Building on the successes achieved after the publication of the original statewide cancer plan in 2005, the five NH CCC work groups (primary prevention, prevention and early detection, treatment and survivorship, palliation, and emerging issues) have reevaluated their work plans. The pages that follow outline the priorities, goals, objectives, and strategies that will form the basis of the activities for each work group for the next five years (2010–2014).

Primary Prevention

Strategic Goal: Create environments that support a healthy lifestyle in order to reduce cancer risk.

There are many ways to reduce your risk of developing cancer. Primary prevention focuses on changing behaviors to reduce the risk of developing cancer. The NH CCC's primary prevention work group has focused its efforts on three areas:

- **Tobacco use.** With 17% of New Hampshire adults reporting that they smoked tobacco products in 2008 and 20% of New Hampshire teens reporting that they smoked tobacco products in 2007, the effort to reduce and eliminate the use of tobacco is still at the forefront of cancer prevention.²³

In order to reduce the incidence of tobacco-related disease and preventable deaths, the primary prevention work group fully supports the New Hampshire Tobacco Prevention and Control Program's comprehensive efforts to reduce and eliminate the use of and exposure to tobacco. Several of the objectives described in this section have been designed to prevent children from starting a tobacco habit; eliminate nonsmokers' exposure to secondhand smoke; promote quitting among adults and youth; and identify and eliminate tobacco-related disparities among races.

Cancer prevention is action taken to lower the chance of getting cancer. By preventing cancer, the number of new cases of cancer in a group or population is lowered.

— National Cancer Institute



- ***Obesity, nutrition, and physical activity.*** The 2008 NH BRFSS found that 63% of New Hampshire adults reported being overweight or obese. For New Hampshire youth (students in grades 9 through 12), 26% reported being overweight or obese.¹⁶ Maintaining a healthy weight is believed to be a key factor in reducing risk for cancer, particularly for colon cancer and postmenopausal breast cancer. A person's healthy weight is related to nutrition and physical activity. The primary prevention work group has developed objectives to reduce the number of obese and overweight New Hampshire residents; increase the intake of healthy foods and drinks, consistent with the 2007 World Cancer Research Fund/American Institute for Cancer Research recommendations; and increase the amount of physical activity New Hampshire residents participate in.
- ***Sun safety.*** Skin cancer is highly preventable by reducing and eliminating exposure to sources of cancer-causing ultraviolet radiation, such as sunlight, sunlamps, and indoor tanning facilities. In June 2009, the International Agency for Research on Cancer (IARC) raised the cancer risk category of indoor tanning to the highest level, carcinogenic to humans. After a comprehensive analysis, the IARC concluded that the risk of melanoma increases by 75% when people begin indoor tanning before the age of 30.²⁹ The work group aims to promote these sun-safety messages in New Hampshire in the coming years through several of its strategies.

TOBACCO

Objective 1

Decrease the percent of New Hampshire high school youth who report first using cigarettes before the age of 13 to 8.5%.

Baseline: 11.5%, 2007 NH YRBS

Strategies

- Support measures to increase the cost of a pack of cigarettes to \$5–\$6.
- Support measures to reduce youth access to tobacco products.
- Support measures to fund evidence-based tobacco-prevention programs for youth.
- Partner with the New Hampshire Department of Education to evaluate current health curricula and offer recommendations.

Objective 2

Decrease the percent of New Hampshire adults who report currently:

- Smoking cigarettes to 14%,
- Using smokeless tobacco to 1.5%, and
- Smoking cigars to 4%.

Baseline: 17.1% for cigarettes, 1.9% for smokeless tobacco, and 5.9% for cigars, 2008 NH BRFSS

Strategies

- Increase the number of individuals accessing evidence-based tobacco-cessation services.
- Support funding for treatment services that include nicotine-replacement therapy.
- Support measures to increase the cost of tobacco products.
- Support the engagement of insurers, employers, and insurance purchasers to include evidence-based tobacco-dependence treatment (counseling and pharmacotherapy) as part of their basic health benefits packages.
- Support a targeted, public, evidence-based media campaign focusing on the importance of tobacco-use prevention and cessation.
- Through a baseline survey, determine the number of healthcare providers and healthcare systems following the Public Health Service guidelines.

30% of cancer deaths in the United States are linked to tobacco.

— National Cancer Institute

Objective 3

Increase the percent of adults in New Hampshire who report they are free from exposure to secondhand smoke in the:

- Workplace to 100%,
- Home to 85%, and
- Car to 85%.

Baseline: 81.9% in the workplace, 79.6% in the home, and 77.8% in the car, 2006 NH BRFSS and 2002 New Hampshire Adult Tobacco Survey (NH ATS)

Strategies

- Support initiatives to increase the number of tobacco-free worksites.
- Support a statewide media campaign that includes countermarketing education.
- Work with public-health networks to engage tobacco-control advocates in promoting smoke-free outdoor areas.

Objective 4

Increase the percent of high school youth in New Hampshire who report they are free from exposure to secondhand smoke:

- Indoors to 75%, and
- In a car to 100%.

Baseline: 56.1% indoor and 75% in a car; 2007 Youth Tobacco Survey (YTS)

Strategies

- Promote policies that increase the number of tobacco-free workplaces, houses, and vehicles.
- Support a statewide media campaign that includes countermarketing education.



OBESITY, NUTRITION, AND PHYSICAL ACTIVITY

Objective 5

Reduce the average annual increase in prevalence of overweight and obese adults to 0%.

Baseline: 1%, 2008 NH BRFSS

Strategies

- Support policies that promote healthy eating and active living in worksites and communities.
- Coordinate with HEAL New Hampshire to use social marketing and media campaigns to disseminate consistent messages that promote healthy eating and active living.
- Encourage healthcare providers and health educators to promote the current dietary guidelines for Americans (updated every five years by the U.S. Department of Health and Human Services and the U.S. Department of Agriculture) and physical activity guidelines for Americans (published by the U.S. Department of Health and Human Services) with patients and clients.

Objective 6

Reduce the average biennial increase in the percent of overweight and obese youth from 1.2% to 0%.

Baseline: 13.2%, 2005 NH YRBS; 14.4%, 2007 NH YRBS

Strategies

- Support policies that promote healthy eating and active living in childcare programs, schools, and communities.
- Encourage educators to promote the current dietary guidelines for Americans (updated every five years by the U.S. Department of Health and Human Services and the U.S. Department of Agriculture) and physical activity guidelines for Americans (published by the U.S. Department of Health and Human Services) with students, families, faculty members, and school staff members.
- Promote the implementation of the CDC's School Health Index (a self-assessment and planning tool that schools can use to improve their health and safety policies and programs) by New Hampshire schools.

Objective 7

Increase the percent of adults who report regularly engaging in moderate or vigorous physical activity to 57% and 33%, respectively.

Baseline: 54% for moderate physical activity and 31.2% for vigorous physical activity, 2007 NH BRFSS

Strategies

- Support policies that promote healthy eating and active living in worksites and communities.
- Increase the number of schools that provide access to their physical-activity facilities (e.g., gyms, tracks, tennis courts) for community members outside of regular school hours.

Objective 8

Increase the percent of youth who report being physically active at least 60 minutes per day on five or more of the past seven days to 49%.

Baseline: 46.9%, 2007 NH YRBS

Strategies

- Increase the number of schools that provide access to their physical-activity facilities (e.g., gyms, tracks, tennis courts) for youth and their families outside of regular school hours.
- Increase the number of schools that promote safe walking and biking routes to school (up to a two-mile radius).
- Increase the number of schools that participate in the Catch Kids Club after-school program, which emphasizes physical activity.
Baseline: Since the program began in 2004, it has expanded to 18 sites in New Hampshire in 2009

At least 25% to 30% of cancers are due to lifestyle factors.

— National Cancer Institute

Objective 9

Reduce the percent of youth who report watching three or more hours of television per day to 23%.

Baseline: 25.1%, 2007 NH YRBS

Strategies

- Promote the practice of 5-2-1-0 in pediatric and school settings.
- Reduce the use of television in school, community, and childcare settings.
- Increase the number of schools that promote and participate in TV Turnoff Week.

Objective 10

Increase the percent of adults who report eating fruits and vegetables five or more times per day to 30%.

Baseline: 28.5%, 2007 NH BRFSS

Strategies

- Increase the number of worksites and community organizations that adopt healthy eating policies.
- Incorporate CDC fruit and vegetable strategies into the NH DPHS programs.



Objective 11

Increase the percent of youth who report eating fruits and vegetables five or more times per day to 24%.

Baseline: 22.3%, 2007 NH YRBS

Strategies

- Promote access to and consumption of fruits and vegetables in communities, schools, and childcare programs.
- Support the New Hampshire Fresh Fruit and Vegetable Program by providing nutrition-education materials, technical assistance, and overall program promotion.

Objective 12

Reduce the percent of youth who report drinking a sugar-sweetened beverage one or more times a day to 22%.

Baseline: 24.2%, 2007 NH YRBS

Strategies

- Promote access to and consumption of quality drinking water in communities, schools, and childcare programs.
- Collaborate with partners (including HEAL and the New Hampshire Dental Society) to eliminate advertising of access to sugar-sweetened beverages in school settings.
- Include information about sugar-sweetened beverages in comprehensive nutrition-education curricula.

Objective 13

Increase the percent of mothers who report exclusively breastfeeding their infants at three months and at six months to 40% and 17%, respectively.

Baseline: 38% and 11.6%, respectively, 2005 National Immunization Survey

Strategies

- Encourage maternity units to incorporate *Ten Steps to Successful Breastfeeding* (part of *Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services*, a joint World Health Organization and UNICEF statement).
- Promote “mother friendly” workplaces to provide support for breastfeeding in the workplace.
- Work with the NH CCC Communications Committee to broadcast (through local media outlets) public service announcements from the 2004 *Babies Were Born to Be Breastfed* campaign, created by the U.S. Department of Health and Human Services Office on Women’s Health and the Ad Council.
- Encourage New Hampshire healthcare providers to routinely offer prenatal classes on breastfeeding to all pregnant women.

SUN SAFETY

Objective 14

Reduce the percent of adults who report having had a sunburn in the past year to 38%.

Baseline: 42.6%, 2004 NH BRFSS

Strategies

- Work with partners to increase the number of townwide and citywide educational efforts that emphasize the importance of adopting sun-safety behaviors in order to reduce the risks of developing skin cancer.
- Implement an effective media and public service campaign that promotes sun-safety practices.
- Create statewide partnerships to further sun-safety education and practices among children and adults. This includes promoting activities that encourage sun-safety behaviors at school, at home, and in recreational settings.
- Fund a repeat of the 2004 NH BRFSS question (used to establish a baseline) on the 2010 or 2011 BRFSS.

Although skin cancer is the most common form of cancer in the United States, research shows that most skin cancers can be prevented if people are protected from UV light.

— Centers for Disease Control and Prevention

Objective 15

Promote the strengthening of state regulations concerning youth and indoor tanning facilities.

Strategies

- Support an indoor tanning question on the 2011 NH YRBS to create a baseline measure of teen indoor tanning.
- Promote awareness of tanning regulations in New Hampshire.
- Work with the NH CCC Communications Committee to develop messages for teens about the dangers of indoor tanning.

Objective 16

Promote state-of-the-art diagnostic procedures for melanoma to New Hampshire healthcare providers.

Strategies

- Promote and/or develop continuing education programs for New Hampshire healthcare providers about early diagnosis of melanoma.
- Work with the NH CCC Communications Committee to develop key messages that encourage sun safety and early detection of skin cancer.
- Implement training incentives for physicians, nurse practitioners, and physicians' assistants by providing professional development hours or continuing education credits relating to skin cancer.
- Collaborate with comprehensive cancer control programs in other states to develop medical education and/or distance-learning activities for rural primary care physicians (PCPs).



Prevention and Early Detection

Strategic Goal: Reduce cancer morbidity and mortality by increasing awareness and screening rates for those cancers where evidence-based guidelines exist.

People can reduce their risk of getting some cancers by following recommended screening guidelines. Screenings can find cancers at an early stage, which can increase the available treatment options and decrease mortality rates for breast, cervical, and colorectal cancers. Colorectal and cervical cancer screening can find changes early and prevent cancer from developing.

In New Hampshire, the prevention and early detection work group has focused its efforts on:

- **Colorectal cancer.** Because individuals have access to several available screening options that can be effective in preventing colorectal cancer, it is critically important to increase New Hampshire's screening rates and, therefore, prevention and early diagnosis of this disease. Even though early diagnosis and treatment of colorectal cancer can result in a five-year survival rate of 90%, only about 47% of colorectal cancers in New Hampshire were diagnosed at the early stage in 2006.¹

Toward the goal of screening 80% of New Hampshire residents who are 50 and older for colorectal cancer, DHMC (with partners in the NH CCC and NH DPHS) in 2009 was awarded a \$3.5 million cooperative agreement over a five-year period from the CDC. To achieve the 80% goal, partners plan to conduct outreach and public education to increase awareness; work with healthcare providers to improve office systems; work with employers to allow time off from work for screening; address health plans' policies in order to decrease financial barriers to screening; and provide a small number of free colonoscopies to New Hampshire residents age 50–64 who are uninsured and at or below 250% of the federal poverty level.

- **Breast cancer.** When breast cancer is detected early (at the localized stage) the five-year survival rate is 98%.¹⁵ Despite the availability of screening through mammography and clinical breast exams, New Hampshire has seen a decline in the percent of women who reported that they had been screened in the last three years (89.8% of women in 2004 versus 86.1% in 2008, according to the 2008 NH BRFSS).³⁰ By improving breast cancer screening rates, New Hampshire may see more early-stage diagnoses and significant reductions in mortality. To that end, the prevention and early detection work group has identified several objectives and will continue to support the New Hampshire Breast and Cervical Cancer Program (NH BCCP), which provides free clinical breast exams, mammograms, and diagnostic services for low-income, uninsured women age 18–64.

- **Cervical cancer.** Cervical cancer is one of the most treatable cancers when detected early through a Pap test. In addition, although there are more than 100 types of human papillomavirus (HPV), approximately 70% of cervical cancers are caused by HPV type 16 or 18, both of which now have vaccines. Because cervical cancer cells can be detected early with a Pap test or possibly prevented with a vaccine, cervical cancer is not one of the most frequently diagnosed cancers in New Hampshire. However, the rates for cervical cancer screening have either remained the same or declined across all income and education levels between 2002 and 2008.^{16,31} The prevention and early detection work group has prioritized the goal of increasing the number of New Hampshire women who report receiving a Pap test.

Cancers that can be prevented or detected earlier by screening account for at least half of all new cancer cases.

— American Cancer Society

- **Prostate cancer.** In 2009, there is no consensus among national organizations regarding prostate cancer screening. Both the ACS and the United States Preventive Services Task Force recommend that men engage in shared decision making with their physicians. To help New Hampshire men determine what is best for their needs, the NH CCC will continue to work closely with the NHPCC to encourage informed decision making between men and their healthcare providers.

No matter the type of cancer, it is critical that the unequal cancer burden among minorities and underserved populations be addressed. The NH CCC has identified target populations to eliminate health disparities in the state.

Objective 17

Increase the percent of adults age 50 and older who report being screened for colorectal cancer to 80%.

Baseline: 69.8% adults screened, 2008 NH BRFSS

Strategies

- Work with healthcare systems to adopt the NH CCC colorectal cancer objective and determine how to measure progress.
- Work with healthcare providers to implement the use of provider reminder and recall systems.
- Conduct provider education and training to increase awareness of the need for colorectal cancer screening.
- Work with health insurance plans to adopt the NH CCC colorectal cancer objective as measured by Healthcare Effectiveness Data and Information Set (HEDIS) rates; to expand benefits for colorectal cancer screening by removing required deductibles and copayments; and to provide coverage for colorectal cancer screening in all plans.



According to the 2008 NH BRFSS, 8.6% of New Hampshire adults age 18 and older reported that they have been told by a healthcare provider they have cancer.

- Work with employers to implement policies that support colorectal cancer screening, such as providing time off from work as well as expanding health benefits to remove deductibles and copayments.
- Explore mandatory insurance coverage legislation if other strategies do not decrease the barriers to screening.
- Promote the development of patient navigation programs specifically for screening.
- Conduct public awareness and educational activities that include targeted small-media campaigns and large-scale media campaigns.
- Reduce disparities in colorectal cancer incidence and mortality by implementing and supporting the NHCRCSP to provide a limited number of free colonoscopies to New Hampshire's uninsured or underinsured residents.
- Implement and support NHCRCSP's population-based strategies designed to reduce barriers to screenings, and increase colorectal cancer screening through work with individuals, providers, employers, health insurance companies, healthcare systems, legislators, and community groups.
- Expand the NH BRFSS to include questions regarding perceived barriers to colorectal cancer screenings (such as transportation, reimbursement, capacity, loss of work time, fear, and embarrassment) and develop plans to reduce barriers based on the responses to these questions.
- Explore using colonoscopy volume data from the NHCR as an outcome measure in addition to the NH BRFSS.
- Use data and publications, when available, from the NHCR to understand and address how screening and surveillance are being practiced. This information (including follow-up intervals; incidence and prevalence of polyps; percent of high-risk individuals; and complications) will help improve colorectal cancer screening.
- Create and implement methodology to assess screening and surveillance for average-risk and increased-risk groups separately.

Objective 18

Decrease the percent of distant and regional staged colorectal cancer to 35%.

Baseline: 45%, NH DHHS, HSDM

Strategies

- Work with healthcare systems to adopt the NH CCC colorectal cancer objective and determine how to measure progress.
- Work with healthcare providers to implement the use of provider reminder and recall systems.
- Conduct provider education and training to increase awareness of the need for colorectal cancer screening.

- Work with health insurance plans to adopt the NH CCC colorectal cancer objective as measured by HEDIS rates; to expand benefits for colorectal cancer screening by removing required deductibles and copayments; and to provide coverage for colorectal cancer screening in all plans.
- Work with employers to implement policies that support colorectal cancer screening, such as providing time off from work as well as expanding health benefits to remove deductibles and copayments.
- Explore mandatory insurance coverage legislation if other strategies do not decrease the barriers to screening.
- Promote the development of patient navigation programs specifically for screening.
- Conduct public awareness and educational activities that include targeted small-media campaigns and large-scale media campaigns.
- Reduce disparities in colorectal cancer incidence and mortality by implementing and supporting the NHCRCSP to provide a limited number of free colonoscopies to New Hampshire's uninsured or underinsured residents.
- Implement and support NHCRCSP's population-based strategies designed to reduce barriers to screenings, and increase colorectal cancer screening through work with individuals, providers, employers, health insurance companies, healthcare systems, legislators, and community groups.
- Expand the NH BRFSS to include questions regarding perceived barriers to colorectal cancer screenings (such as transportation, reimbursement, capacity, loss of work time, fear, and embarrassment) and develop plans to reduce barriers based on the responses to these questions.
- Explore using colonoscopy volume data from the NHCR as an outcome measure in addition to the NH BRFSS.
- Use data and publications, when available, from the NHCR to understand and address how screening and surveillance are being practiced. This information (including follow-up intervals; incidence and prevalence of polyps; percent of high-risk individuals; and complications) will help improve colorectal cancer screening.
- Create and implement methodology to assess screening and surveillance for average-risk and increased-risk groups separately.

Objective 19

Increase the percent of women age 40 and older in the lowest income and education levels who report receiving recommended breast cancer screenings to 68% and 69%, respectively.

Baseline: 66.4% and 66.8%, 2008 NH BRFSS

Strategies

- Enhance existing and develop new strategies to advocate for continued funding for the NH BCCP as well as Medicaid treatment options at the state and federal levels.

- Promote the use of client reminders (such as phone calls or postcards) for appointments to increase the percent of underserved women accessing regular breast cancer screenings.
- Continue to measure mammogram rates every two years through the NH BRFSS.
- Collect and evaluate data on diverse and disparate populations to establish a baseline in order to promote evidence-based interventions that will target diverse and disparate women for screening.
- Promote the use of interventions that include one-on-one education in hospitals, community health centers, and other provider-based settings for women to increase the rate of breast cancer screening.

Objective 20

Increase the percent of women between the ages of 18 and 69 who report having had a Pap test in the previous three years to 91.1%.

Baseline: 86.1%, 2008 NH BRFSS

Strategy

- Among PCPs, promote the use of client reminders (such as phone calls or postcards) for Pap test appointments.

Objective 21

Increase the percent of women at the lowest income and education levels who report having had a Pap test in the previous three years.

Baseline: 66.7%, 2008 NH BRFSS

Strategies

- Identify and, if necessary, develop culturally sensitive educational materials to effectively reach targeted populations.
- Conduct outreach to increased-risk populations by partnering with key organizations (such as the Minority Health Coalition, the Manchester and Nashua Health Departments, and Planned Parenthood) that are located within the targeted areas.

Objective 22

Increase the number of men age 40 and older who report having discussed prostate cancer screening with their healthcare providers (in other words, those who have made an informed decision about the screening) to 73%.

Baseline: 68.9%, 2008 NH BRFSS

Strategies

- Continue to work with the NHPCC through members' presence on the NH CCC prevention and early detection work group.
- Continue to support the NHPCC's strategic goals.

Treatment and Survivorship

Strategic Goal: Quality care shall be available and accessible to the people of New Hampshire through all phases of the cancer continuum.

Because cancer treatment changes rapidly and is increasingly complex, careful attention is required to ensure that New Hampshire residents continually have access to current approaches to care.

Generally, it is through clinical research trials that advancements and improvements in cancer treatment occur. By enrolling in a clinical trial, cancer survivors may be some of the first patients to benefit from a new cancer treatment while contributing to cancer research. New Hampshire residents have access to clinical trials at many of the state's cancer centers.

Still, it is important to stress that cancer treatment involves more than the acute disease process; the short- and long-term effects of cancer and cancer treatment on the patient (and his or her caregivers) must be considered. As the number of cancer survivors in New Hampshire increases, more services will be needed to treat the physical, psychological, social, spiritual, and financial issues faced by cancer survivors.

The treatment and survivorship work group aims to stay up-to-date with all the exciting and innovative approaches to address survivorship issues in New Hampshire. These approaches include patient navigation programs, cancer follow-up care plans, and survivorship resource directories.

Nonetheless, it remains important for the treatment process to also include the discussion of advanced-care directives before a directive is needed.

Objective 23

Disseminate information about existing and evolving survivorship resources to 50% of targeted New Hampshire healthcare providers and a majority of survivors.

Strategies

- Develop a baseline number of targeted healthcare providers (e.g., PCPs, oncologists, and cancer centers).
- Group and catalog survivorship resources.
- Populate the NH CCC website with resources available to survivors.
- Disseminate information about survivorship resources at the NH CCC annual conferences.
- Provide survivorship resources and information to targeted healthcare providers.
- Identify opportunities for collaboration among the NH CCC work groups.

An individual is considered a cancer survivor from the time of diagnosis through the balance of his or her life. In addition, because a cancer diagnosis also affects family members, friends, and caregivers, they too are considered cancer survivors.

— National Cancer Institute



Objective 24

Increase the use of survivorship care plans by 50% among providers working with cancer survivors.

Strategies

- Create an electronic survey (such as through www.SurveyMonkey.com) to establish a baseline for the current use of survivorship care plans.
- Drive traffic from the above survey to the NH CCC website to disseminate information about survivorship care plans.

Objective 25

Disseminate consumer-oriented, clinical-trial information to the general public.

Strategies

- Provide five public-education events across the state regarding clinical trials (e.g., Clinical Trials 101) during the next five years.
- Develop a consumer-friendly (patient) tool within the NH CCC website that outlines the advantages and disadvantages of clinical-trial participation.
- Develop a consumer-friendly link(s) within the NH CCC website to disease-specific clinical protocol sites.

Objective 26

Increase provider awareness of clinical trials.

Strategies

- Offer a workshop for clinical-trial coordinators in collaboration with an NH CCC annual meeting.
- Explore the potential benefits of developing a professional network of clinical-trial coordinators for New Hampshire.

Palliation

Strategic Goal: Provide effective patient- and family-centered palliative care to cancer survivors in New Hampshire.

As more people continue to live with chronic, debilitating, and life-threatening illnesses, including cancer, healthcare providers are working to provide effective care in these situations.

Cancer presents survivors and their families with a number of challenges. For example, more than 70% of survivors are estimated to experience pain,^{32,33} and many also experience nausea, difficulty breathing, depression, fatigue, as well as other physical and psychological symptoms. In addition, survivors and their families require the knowledge to make

informed decisions, to maintain an enhanced quality of life, to optimize body function, and to preserve opportunities for personal well-being and development.

At all phases of the disease (staging, treatment, survivorship, relapse or recurrence, advanced illness, and dying), cancer-care providers of all disciplines should have the basic knowledge and skills required to:

- Communicate effectively with cancer patients and their families;
- Promote informed decisions; and
- Assess and manage physical discomfort and emotional distress.

The palliation work group designed its objectives to ensure that palliative and consultation services as well as hospice programs are available to support survivors, families, and oncology teams.

Objective 27

Increase the participation of hospitals providing palliative-care services to cancer survivors to 90%.

Baseline: 75%, 2008 data from Foundation for Healthy Communities/NH CCC survey of hospitals in New Hampshire

Strategies

- Disseminate palliative-care survey results and develop our own report card for comparison.
- Educate NH CCC work groups about palliative care and the National Quality Forum.

The goal of palliative care is to prevent and relieve suffering, and to support the best possible quality of life for patients and their families, regardless of the stage of the disease or the need for other therapies. Palliative care is both a philosophy of care and an organized, highly structured system for delivering care.

— National Consensus Project for Quality Palliative Care



Any cancer treatment plan certainly should include disease-modifying medical treatments (with the ultimate goals of cure and prolonged survival). However, it is equally important to incorporate symptom control and supportive care with an interdisciplinary patient- and family-centered approach.

For more information about how the National Consensus Project for Quality Palliative Care defines palliative care, see page 40.

- At an NH CCC annual conference, offer a workshop about changes and improvements made in palliative-care awareness in New Hampshire.
- Work with hospitals' cancer committees to assess the need for continued professional education about offering palliative care from the time of patient diagnosis.
- Disseminate palliative-care information, including work group studies, to hospitals' cancer committees.
- Identify hospitals' strengths and weaknesses in relation to palliative care to develop voluntary mentorship programs.
- Conduct a palliative-care follow-up survey in 2013.

Objective 28

Establish a baseline of how cancer survivors access information about palliative care.

Strategies

- Conduct a baseline needs assessment of palliative-care information at healthcare organizations such as hospitals, cancer centers, oncology groups, long-term care settings, and pediatric-care settings.
- Based on the results of the needs assessment, develop guidelines to be used in all informational pieces developed and disseminated by the palliation work group.
- Work with the NH CCC Communications Committee to develop materials that are targeted to a variety of groups (cancer patients, family members, etc.) and settings (hospitals, cancer centers, oncology groups, long-term-care settings, pediatric-care settings, etc.).

Objective 29

Increase the proportion of New Hampshire cancer-care settings that have adopted evidence-based assessment and symptom management by a minimum of 5%.

Strategies

- Survey cancer-care settings in the state to establish a baseline of those that have adopted evidence-based assessment and symptom management.
- Continue to participate in the NHHPCO's annual Pain and Beyond Conference to promote professional education about pain-management issues and trends in hospice and palliative care.
- Collaborate with the NHPI and the NHHPCO Palliative Care Clinician Group to strengthen clinician best practices for cancer pain management and access to palliative care from diagnosis, including responsible opioid prescribing.
- Educate New Hampshire professionals about evidence-based practice as it relates to cancer symptom management.
- Disseminate information to long-term-care facility professionals about the best practices for symptom management in cancer patients as well as the goals of hospice and palliative care.

Emerging Issues

Strategic Goal: People in New Hampshire will become aware of emerging issues in cancer that are relevant to residents within our state.

In cancer research, exciting developments continually bring to light important emerging issues throughout the cancer continuum. The emerging issues work group provides information about new scientific developments in research that can improve New Hampshire residents' quality of life.

Although the NH CCC and the work group recognize that almost any cancer issue could be considered emerging based on the rapid expansion of new information in journals and in the media, we focus on those topics that lack public clarity, professional consensus, funding, and supporting laws or guidance, and that have the potential to significantly affect cancer prevention and control in New Hampshire, based on the characteristics of the Granite State's population.

While there have been strides in the chemical, radiological, and surgical treatment of the disease, cancer continues to claim the lives of millions of people each year. There is a clear and urgent need to develop new approaches to cancer treatment and prevention.

— The Cancer Research Institute

Objective 30

Identify four emerging issues within the continuum of cancer annually.

Strategies

- Develop criteria for selecting priority issues from existing emerging issues.
- Select four of those issues each year about which to disseminate information using the developed criteria.
- Rank the four issues for order of information dissemination.

Objective 31

Develop materials for each emerging issue to translate the information and make it accessible to targeted audiences.

Strategies

- Identify the appropriate format to communicate information for each issue.
- Identify the appropriate audience for each issue.
- Develop the appropriate materials for communicating each issue.



Objective 32

Each quarter, disseminate the information about one issue to targeted audiences.

Strategies

- Post information on each issue to NH CCC website.
- Communicate information on each issue to NH CCC work group chairs for distribution among members.
- Provide information on each issue to NH CCC stakeholders in the organization's newsletter.
- Partner with NH CCC Communications Committee to publicize newsworthy information to statewide media.

Objective 33

Monitor the identified emerging issues until scientific consensus is reached.

Strategies

- Review the latest science and articles on each identified emerging issue.
- Communicate any significant evolution or consensus regarding the issue.

REFERENCES AND RESOURCES

Glossary of Terms

Average-Risk

For purposes of this plan, *average-risk* for colorectal cancer means individuals age 50 or older without a family or personal history of colorectal cancer or polyps *and* without a personal history of inflammatory bowel disease (IBD).

Cancer Survivor

The NH CCC uses the NCI's definition of a *cancer survivor*: An individual is considered a cancer survivor from the time of diagnosis through the balance of his or her life. In addition, because a cancer diagnosis also affects family members, friends, and caregivers, they too are considered cancer survivors.

Comprehensive Cancer Control

Comprehensive cancer control is a collaborative process that localizes a national issue by connecting a community and its partners to pool resources and efforts to reduce cancer risk, find cancers sooner, and increase the number of cancer survivors.

Comprehensive cancer control receives national leadership in part from the CDC, which supports cancer control programs in all 50 states, the District of Columbia, seven tribes and tribal organizations, as well as seven United States Associated Pacific Islands and Territories.

Continuum of Cancer

The continuum of cancer begins at primary prevention, and includes all types of treatment through end of life.

5-2-1-0

For purposes of this plan, *5-2-1-0* refers to eating five fruit and vegetable servings, getting two hours of physical activity, consuming one hour of screen time, and drinking zero sugar-sweetened beverages each day.

Free from Exposure

For purposes of this plan, *free from exposure* means rules, policies, or legislation are in place to prevent tobacco use in such locations.

Incidence

Incidence refers to the number, or rate, of newly diagnosed cases of cancer. In this plan, rates are age-adjusted to the 2000 United States standard population, and exclude basal cell and squamous cell skin cancers as well as in situ (malignant but noninvasive) carcinomas, except urinary bladder.

Increased-Risk

For purposes of this plan, *increased-risk* for colorectal cancer means individuals with a personal or family history of colorectal cancer or polyps, or with a personal history of IBD.

Morbidity

Morbidity refers to a disease or the incidence of disease within a population, as well as adverse effects caused by a treatment.

Mortality

Mortality refers to the number, or rate, of deaths from cancer. In this plan, rates are age-adjusted to the 2000 United States standard population. Cancer mortality site groupings are defined by the National Center for Health Statistics (NCHS) and are based on ICD-10 (International Classification of Diseases) classification.

National Vital Statistics System

The National Vital Statistics System is for the collection and dissemination of the United States' official vital statistics through inter-governmental data sharing. Data are provided through contracts between the NCHS and vital registration systems in various jurisdictions that are legally responsible for the registration of vital events, such as births, deaths, marriages, divorces, and fetal deaths.

New Hampshire Behavioral Risk Factor Surveillance System (NH BRFSS)

The New Hampshire Behavioral Risk Factor Surveillance System (NH BRFSS) is a state-based system of health surveys that collects information on health risk behaviors, preventive health practices, and healthcare access primarily related to chronic disease and injury.

New Hampshire Youth Risk Behavior Survey (NH YRBS)

The New Hampshire Youth Risk Behavior Survey (NH YRBS) monitors priority health-risk behaviors as well as the prevalence of obesity and asthma among youth and young adults. The NH YRBS includes a national school-based survey conducted by the CDC as well as state, territorial, tribal, and local surveys conducted by state, territorial, and local education and health agencies and tribal governments.

New Hampshire State Cancer Registry (NHSCR)

The New Hampshire State Cancer Registry (NHSCR) is a central bank of information on all cancer cases of New Hampshire residents who are diagnosed or treated in New Hampshire or out of state since January 1, 1987. The registry enables the state to collect information on new cases (incidence) of cancer. Previously, the state kept records only on deaths from cancer. The information maintained by the registry allows the NH DHHS to study cancer trends and improve cancer education and prevention efforts.

New Hampshire Division of Vital Records and Administration

In New Hampshire, towns are required to file certified copies of death certificates with the New Hampshire Division of Vital Records and Administration under Department of State for all deaths occurring in their jurisdictions. Towns are responsible for maintaining the vital statistics system, and they provide death data to the NHSCR.

Overweight and Obese

Overweight and obesity ranges are determined by body mass index (BMI). BMI is calculated by dividing weight in pounds (lbs) by height in inches (in) squared and multiplying by a conversion factor of 703.

For adults 20 years old and older, BMI is interpreted using standard weight status categories that are the same for all ages as well as for both men and women.

For children and teens, BMI is both age- and sex-specific. Once BMI is calculated, the BMI number is plotted on the CDC BMI-for-age growth charts, for either girls or boys, to obtain a percentile ranking.

Palliative Care

According to the National Consensus Project for Quality Palliative Care: “The goal of palliative care is to prevent and relieve suffering, and to support the best possible quality of life for patients and their families, regardless of the stage of the disease or the need for other therapies. Palliative care is both a philosophy of care and an organized, highly structured system for delivering care. Palliative care expands traditional disease-model medical treatments to include the goals of enhancing quality of life for the patient and family, optimizing function, helping with decision making, and providing opportunities for personal growth. As such, it can be delivered concurrently with life-prolonging care or as the main focus of care.”

Secondhand Smoke

Secondhand smoke is defined by the CDC as “a complex mixture of gases and particles that includes smoke from the burning cigarette, cigar, or pipe tip and exhaled mainstream smoke.”³⁴ Each year, secondhand smoke exposure results in thousands of deaths due to lung cancer and heart disease among nonsmoking adults.³⁵

Index of Abbreviations

Here is a list of the abbreviations used throughout this document.

Figure 12

Abbreviation	Term
ACS	American Cancer Society
AJCC	American Joint Committee on Cancer
BMI	Body mass index
CDC	Centers for Disease Control and Prevention
CS	Collaborative staging
CSR	<i>Cancer Statistics Review</i>
DHMC	Dartmouth-Hitchcock Medical Center
EOD	Extent of disease
HEAL	Healthy Eating Active Living
HEDIS	Healthcare Effectiveness Data and Information Set
HPV	Human papillomavirus
HSDM	Office of Health Statistics and Data Management
IARC	International Agency for Research on Cancer
IBD	Inflammatory bowel disease
ICD	International Classification of Diseases
NCHS	National Center for Health Statistics
NCI	National Cancer Institute
NIH	National Institutes of Health
NH ATS	New Hampshire Adult Tobacco Survey
NH BCCP	New Hampshire Breast and Cervical Cancer Program
NH BRFSS	New Hampshire Behavioral Risk Factor Surveillance System
NH CCC	New Hampshire Comprehensive Cancer Collaboration
NHCR	New Hampshire Colonoscopy Registry
NHCRCSP	New Hampshire Colorectal Cancer Screening Program
NH DHHS	New Hampshire Department of Health and Human Services
NH DPHS	New Hampshire Division of Public Health Services
NHHPCO	New Hampshire Hospice and Palliative Care Organization
NHPCC	New Hampshire Prostate Cancer Coalition
NHPI	New Hampshire Pain Initiative
NHSCR	New Hampshire State Cancer Registry
NH YRBS	New Hampshire Youth Risk Behavior Survey
NOS	Not otherwise specified
PCP	Primary care physician
PSA	Prostate-specific antigen
SEER	Surveillance, Epidemiology and End Results Program
TNM	Tumor, nodes, metastasis
WMRSD	White Mountain Regional School District
WONDER	Wide-ranging Online Data for Epidemiologic Research
YTS	Youth Tobacco Survey

SEER Summary Staging

Staging is the most basic way of categorizing how far a cancer has spread from its point of origin. Staging uses all information available in the medical record, and is a combination of the most precise clinical and pathological documentation of the extent of disease (EOD).

Since cancer data collection and registries were established, summary staging has been used to define cancer by its stage: in situ; local; regional to lymph nodes; regional by direct extension; both regional lymph nodes and regional extension; regional not otherwise specified; and distant. Less complex than other staging systems (specifically EOD or tumor, nodes, metastasis (TNM)), summary staging was written for registrars and epidemiologists who wanted to measure cancer surveillance with longitudinal stability for population-based cancer registries. The summary staging commonly used dates from 1977;³⁶ the site-specific sections were revised and updated in a new edition published in 2001.³⁷

Collaborative staging (CS), a new coding system for staging of cancer, brings together the principles of summary staging; the TNM categories and stage groupings; and the EOD coding structure. This project is sponsored by the American Joint Committee on Cancer (AJCC) in collaboration with the NCI SEER Program, CDC National Program of Cancer Registries, National Cancer Registrars Association, North American Association of Central Cancer Registries, and American College of Surgeons Commission on Cancer.

The initial focus of CS was to develop a translation or other method of conversion between the TNM staging system of the AJCC and the SEER summary staging system. Such a translation eliminates duplicate data collection by registrars who are reporting to clinical (facility-based) and epidemiologic (central) registries; addresses the concerns of clinicians for more clinically relevant data; addresses the concerns of the public health sector about data reproducibility over time; and provides a higher degree of compatibility between the systems that could expand data-sharing opportunities.

There are five main categories in summary staging. In addition, the regional stage is subcategorized by the method by which the cancer spread. The code structure follows.

Figure 13

Code	Definition
0	<i>In situ</i> —The technical definition of <i>in situ</i> is the presence of malignant cells within the cell group from which they arose. There is no penetration of the basement membrane of the tissue and no stromal invasion.
1	<i>Localized only</i> —A localized cancer is a malignancy limited to the organ of origin; it has spread no farther than the organ in which it started.
2	<i>Regional by direct extension only</i> —Invasion through an entire wall of an organ into surrounding organs and/or adjacent tissues.
3	<i>Regional lymph nodes involved only</i> —The tumor has invaded walls of lymphatics where cells can travel through lymphatic vessels to nearby lymph nodes. There, they are “filtered” out and begin to grow in the nodes.
4	<i>Regional by both direct extension and lymph node involvement</i> —A combination of direct extension and lymph node involvement.
5	<i>Regional, NOS (not otherwise specified)</i> —This category may be used when it is unclear whether the tissues are involved by direct extension or lymph nodes, or when the other categories are not applicable, such as for staging non-Hodgkin and Hodgkin lymphomas of more than one lymph node chain.
7	<i>Distant site(s)/node(s) involved</i> —Distant metastases are tumor cells that have broken away from the primary tumor, have traveled to other parts of the body, and have begun to grow at the new location. Cancer cells can travel from the primary site in any of four ways: <ul style="list-style-type: none"> • From the primary organ beyond the adjacent tissue into the next organ; • Lymph channels beyond the first (regional) drainage area (distant lymph nodes); • Hematogenous or blood-borne metastases; or • Through fluids in a body cavity.
8	Not applicable
9	<i>Unknown if extension or metastasis (unstaged, unknown, or unspecified)</i> —Death certificate-only case.

Data Sources

The Office of Health Statistics and Data Management (HSDM) relies on a number of data sources to support its analysis and recommendations. Incidence data on cancer in New Hampshire for the years 2002–2006 are collected by the New Hampshire State Cancer Registry (NHSCR) and summarized by the New Hampshire Department of Health and Human Services (NH DHHS). Invasive cancer is classified in accordance with the *International Classification of Disease—Oncology, Third Edition* (ICD-O-3). Stage of cancer is based on the Surveillance, Epidemiology and End Results (SEER) Program of the National Cancer Institute (NCI), an authoritative source of information on cancer incidence and survival in the United States, and collaborative staging (CS) in 2000 and 2004.

Mortality data on cancer in New Hampshire come from the Department of State, Vital Records Administration, and are summarized by the NH DHHS. Underlying causes of death are classified in accordance with the International Classification of Disease (ICD). Deaths for 1979–1998 are classified using the 9th revision (ICD-9). Deaths for 1999 and beyond are classified using the 10th revision (ICD-10).

National data for cancer incidence and mortality come from the SEER Program. The *SEER Cancer Statistics Review (CSR)*—a report of the most recent cancer incidence, mortality, survival, prevalence, and lifetime risk statistics—is published annually by the Cancer Statistics Branch of the NCI. This edition includes statistics from 1975 through 2006, the most recent year for which data are available. For all the comparisons, the same time span of state data was used, 2002–2006, and the racial categorization of white was used.

In addition, data from the New Hampshire Behavioral Risk Factor Surveillance System (NH BRFSS) are utilized in the plan. The NH BRFSS tracks health risks and behaviors in the United States at the state level. Other data sources include the Youth Tobacco Survey (YTS), both for the United States and New Hampshire; CDC Mortality Statistics through CDC WONDER; American Cancer Society's (ACS) *Facts and Figures*; and the U.S. Census Bureau.

Cancer Prevention and Screening Guideline Sources

Agency for Healthcare Research and Quality

Guide to Clinical Preventive Services
540 Gaither Road, Suite 2000
Rockville, MD 20850
301-427-1364
www.ahrq.gov/clinic/cps3dix.htm

American Academy of Dermatology

930 East Woodfield Road
Schaumburg, IL 60173
866-503-SKIN (888-503-7546)
www.aad.org

American Cancer Society

250 Williams Street, NW
Atlanta, GA 30303-1002
404-327-6411 | www.cancer.org

American College of Surgeons

Commission on Cancer
633 North Saint Clair
Chicago, IL 60611
312-202-5085
www.facs.org/cancer/index.html

American Gastroenterological Association

4930 Del Ray Avenue
Bethesda, MD 20814
301-654-2055 | www.gastro.org

American Lung Association

1301 Pennsylvania Avenue, NW, Suite 800
Washington, DC 20004
800-LUNG-USA | www.lungusa.com

American Society of Clinical Oncology (ASCO)

2318 Mill Road, Suite 800
Alexandria, VA 22314
571-483-1300 | www.asco.org

Cancer Information Service of New England

55 Church Street, Suite 400
New Haven, CT 06510
203-865-2655 | cis.nci.nih.gov/community/regions/newengland.html

Centers for Disease Control and Prevention (CDC)

Division of Cancer Prevention and Control
1600 Clifton Road
Atlanta, GA 30333
800-CDC-INFO | www.cdc.gov

National Cancer Institute (NCI)

Surveillance, Epidemiology and End Results (SEER)
Suite 504, MSC 8316
6116 Executive Boulevard
Bethesda, MD 20892
301-496-8510
www.seer.cancer.gov

National Comprehensive Cancer Network

275 Commerce Drive, Suite 300
Fort Washington, PA 19034
215-690-0300
www.nccn.org



NH CCC MEMBERS

2009–2010 NH CCC Board of Directors

We wish to thank the members of our current Board of Directors for their leadership and dedication to the NH CCC. *Note: Text in parentheses indicates the year Board of Directors service began.*

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Department of Health and Human Services, Division of Public Health Services (DHHS/DPHS) staff participated in the development this plan. The plan is a compilation of objectives built upon the consensus of a wide range of interested stakeholders, and may include policy and advocacy positions that are beyond the role of DHHS/DPHS participants. While there are funding recommendations for increasing resources in this report, it is the NH Legislature's prerogative to recommend the State's resources or policies that would lead to additional funding.

Board of Directors Alumni

We extend our thanks to those who served on the NH CCC Board of Directors during the years 2005 through 2008.

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CITATIONS

1. Office of Health Statistics and Data Management Section (HSDM), Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS), and the New Hampshire State Cancer Registry (NHSCR), 2002–2006.
Information for page 1 was also drawn from the American Cancer Society, *Cancer Facts & Figures 2009*, and based on the National Institutes of Health's estimated overall cost of cancer of \$228.1 billion in 2008.
2. Centers for Disease Control and Prevention (CDC)/ National Center for Health Statistics (NCHS). National Vital Statistics System, National Vital Statistics Reports, Vol. 57, No. 14. April, 17, 2009.
3. Office of Health Statistics and Data Management Section (HSDM), Division of Public Health Services (DPHS), Bureau of Data and Systems Management (BDSM), Office of Medicaid Business and Policy (OMBP), New Hampshire Department of Health and Human Services (NH DHHS), and the New Hampshire Department of State, Division of Vital Records Administration, 2002–2006.
4. National Cancer Institute. www.cancer.gov/cancertopics. Accessed May 30, 2009, and June 2, 2009.
5. U.S. Census Bureau, Current Population Survey, United States: 2008.
6. Horner MJ, Ries LAG, Krapcho M, Neyman N, Aminou R, Howlander N, Altekruse SE, Feuer EJ, Huang L, Mariotto A, Miller BA, Lewis DR, Eisner MP, Stinchcomb DG, Edwards BK (eds). *SEER Cancer Statistics Review* (CSR), 1975–2006. May 29, 2009. Available at: seer.cancer.gov/csr/1975_2006. Accessed July 13, 2009.
7. Compressed Mortality File is produced by the Office of Analysis and Epidemiology (OAE), in the National Center for Health Statistics (NCHS), at the Centers for Disease Control and Prevention (CDC).
8. Ries LAG, Melbert D, Krapcho M, Stinchcomb DG, Howlander N, Horner MJ, Mariotto A, Miller BA, Feuer EJ, Altekruse SE, Lewis DR, Clegg L, Eisner MP, Reichman M, Edwards BK (eds). *SEER Cancer Statistics Review* (CSR), 1975–2005. Available at: seer.cancer.gov/csr/1975_2005. Accessed July 13, 2009.
9. U.S. Census Bureau, 2005–2007 American Community Survey, Data Profile, New Hampshire.
10. Economic Research Service, USDA, Washington DC. State fact sheets: New Hampshire U.S. Department of Agriculture Economic Research Service website. December 2, 2009. Available at: www.ers.usda.gov/StateFacts/NH.htm#PIE. Accessed June 24, 2009.
11. Social Security Administration, Period Life Table, 2005.
12. National Cancer Institute. State cancer profiles; Screening and risk factors. Available at: statecancerprofiles.cancer.gov. Accessed May 30, 2009, and June 2, 2009.
13. Centers for Disease Control and Prevention. www.cdc.gov/cancer/colorectal/basic_info/screening/tests.htm. Accessed August 5, 10, and 11, 2009.
14. National Cancer Institute. State cancer profiles; New cases, deaths. Available at: statecancerprofiles.cancer.gov. Accessed May 30, 2009, and June 2, 2009.
15. American Cancer Society. *Cancer Facts and Figures 2008*. Atlanta: American Cancer Society; 2008.
16. 2008 New Hampshire Behavioral Risk Factor Surveillance System.
17. Office of Health Statistics and Data Management (HSDM), New Hampshire Behavioral Risk Factor Surveillance System Data, Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services 2007–2008.
18. CDC, United States Cancer Statistics, 2005. Skin cancer rates by state.
19. U.S. Census Bureau, Current Population Survey, Unemployment Characteristics, New Hampshire: 2007.
20. American Cancer Society. *Cancer Facts & Figures for African Americans 2007–2008*. Atlanta: American Cancer Society; 2007.
21. American Cancer Society. *Cancer Facts & Figures for Hispanics/Latinos 2003–2005*. Atlanta: American Cancer Society; 2003.
22. McCracken M, Olsen M, Chen MS Jr, Jemal A, Thun M, Cokkinides V, Deapen D, Ward E. Cancer Incidence and Mortality, and Associated Risk Factors Among Asian Americans of Chinese, Filipino, Vietnamese, Korean, and Japanese Ethnicities. *A Cancer Journal for Clinicians*. July 2007. 57:190–205.
23. New Hampshire Department of Health and Human Services, Division of Public Health Services, Bureau of Prevention Services, Tobacco Prevention and Control Program. New Hampshire tobacco data 2000–2007.
24. American Institute for Cancer Research. *Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective*. American Institute for Cancer Research; 2007.
25. National Cancer Institute. Fact sheet on physical activity and cancer. 2009.
26. 2008 New Hampshire Behavioral Risk Factor Surveillance System and 2007 New Hampshire Youth Risk Behavior Survey.
27. 2007 New Hampshire Behavioral Risk Factor Surveillance System.
28. New Hampshire Youth Risk Behavior Survey.
29. El Ghissassi F, Baan R, Straif K, Grosse Y, Secretan B, Bouvard V, et al. A Review of Human Carcinogens, Part D: Radiation. *Lancet Oncol*. July 2009; 751–752.
30. *Cancer Report Card*. New Hampshire Department of Health and Human Services, Division of Public Health Services, Office of Health Statistics and Data Management; April 2009.
31. 2006 New Hampshire Behavioral Risk Factor Surveillance System.
32. Cleeland CS, Gonin R, et al. Pain and its treatment in outpatients with metastatic cancer. *N Engl J Med*. 1994; 330:592–96.
33. Wolfe J, Grier HE, Klar N, et al. Symptoms and suffering at the end of life in children with cancer. *N Engl J Med*. 2000; 342:326–33.
34. Centers for Disease Control and Prevention. http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/index.htm. Accessed December 15, 2009.
35. American Cancer Society. http://www.cancer.org/docroot/PED/content/PED_10_2X_Secondhand_Smoke-Clean_Indoor_Air.asp. Accessed December 14, 2009.
36. *Classification for Extent of Disease*. Self Instructional Manual for Tumor Registrars, Surveillance, Epidemiology, End Results Program. Bethesda, MD: National Cancer Institute; 1977.
37. Young JL Jr, Roffers SD, Ries LAG, Fritz AG, Hurlbut AA (eds). *SEER Summary Staging Manual—2000: Codes and Coding Instructions*. NIH Pub. No. 01-4969. Bethesda, MD: National Cancer Institute; 2001.

About the DHHS/HSDM Methodology

The statistics presented here were generated by the New Hampshire Department of Health and Human Services in 2010 using the following methodology:

The National Institutes of Health estimates overall costs of cancer in 2008 at \$228.1 billion: \$93.2 billion for direct medical costs (total of all health expenditures); \$18.8 billion for indirect morbidity costs (cost of lost productivity due to illness); and \$116.1 billion for indirect mortality costs (cost of lost productivity due to premature death).

In 2008, the American Cancer Society estimated the number of cases of cancer in the United States to be 1,437,180. The same year, there were 7,030 cases diagnosed in New Hampshire.

As a rough average cost for each US case in 2008, the NH DHHS used the following figures: the overall cost of cancer, \$0.158 million: \$0.06 million for direct medical costs (total of all health expenditures); \$0.0130 million for indirect morbidity costs (cost of lost productivity due to illness); \$0.0807 million for indirect mortality costs (cost of lost productivity due to premature death).

To estimate the total costs of cancer to New Hampshire, the cost of each case was multiplied by the total number of cases diagnosed in 2008. Following this principle, the overall cost of cancer in 2008 in New Hampshire is \$1.1 billion; \$421.8 million for direct medical costs (total of all health expenditures); \$91.39 million for indirect morbidity costs (cost of lost productivity due to illness); and \$567.3 million for indirect mortality costs (cost of lost productivity due to premature death).



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