



Preventive Health Care Services Provided to the New Hampshire Medicaid Adult Population – with Comparisons to the Commercially Insured Population

A report prepared for the
New Hampshire Department of Health and Human Services
By the
Maine Health Information Center

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About the New Hampshire Comprehensive Health Care Information System

The New Hampshire Comprehensive Health Care Information System (NH CHIS) is a joint project between the New Hampshire Department of Health and Human Services and the New Hampshire Insurance Department. The NH CHIS was created by state statute (RSA 420-G:11-a) to make health care data “available as a resource for insurers, employers, providers, purchasers of health care, and state agencies to continuously review health care utilization, expenditures, and performance in New Hampshire and to enhance the ability of New Hampshire consumers and employers to make informed and cost-effective health care choices.” For more information about the NH CHIS, please visit <http://www.nh.gov/nhchis> or www.nhchis.org .

About the Study

This study was conducted by the Maine Health Information Center (MHIC) under a contract with the State of New Hampshire Department of Health and Human Services, Office of Medicaid Business and Policy, titled New Hampshire Comprehensive Health Care Information System. The views expressed are those of the authors and do not necessarily represent the views of the MHIC, or the New Hampshire DHHS.

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EXECUTIVE SUMMARY

This study analyzed NH Medicaid claims data to assess a set of 10 preventive care measures specific to the NH Medicaid adult-aged population. NH Medicaid results for these preventive care metrics were assessed for the measurement time periods ending in the three calendar years 2004, 2005, and 2006. Where possible, results for the NH Medicaid population were compared to national averages for Medicaid populations, and to preventive care results for the NH commercially insured population. Several key findings include the observations bulleted below.

- Among nearly 13,000 adult NH Medicaid covered members, adult access to preventive care and ambulatory visit services was above 84 percent in all three measurement years. In 2006, the NH Medicaid adult rate of 84.6 percent was 4 percentage points above the national Medicaid average. Though higher than the national Medicaid average, the 2006 NH Medicaid adult access rate was significantly below the adult access percentage found for the NH commercially insured population of 88.7 percent.
- For 7 of 8 preventive care measures, where national Medicaid averages were available, NH Medicaid results were higher than the national average figures. NH Medicaid results for measurement year 2006 were higher than national Medicaid averages for: Access to preventive care and ambulatory visits; Breast cancer screening; Appropriate use of medications for patients with asthma; Diabetic blood glucose testing; Diabetic LDL testing; Diabetic retinal eye exams; and Diabetic Monitoring for Nephropathy. NH Medicaid results were slightly lower than national Medicaid averages for Cervical Cancer Screening.
- This study examined 4 preventive care measures for patients with diabetes: blood glucose testing; cholesterol (LDL) testing; retinal eye exams; and monitoring for nephropathy . For all 4 measures, NH Medicaid results were above their national Medicaid averages. For the blood glucose testing measure (HbA1c), NH Medicaid's 2006 result was significantly higher than the 2006 result found for the NH commercially insured population. For the other 3 measures, NH Medicaid's 2006 result was not significantly different from the 2006 result found for the NH commercially insured population.
- The percentage of asthma patients with appropriate use of medications was near 80 percent for the NH Medicaid population, and remained steady over the 3 measurement years. In 2006, the NH Medicaid percentage was well above the national Medicaid average for this measure. Compared to the NH commercially insured population, the NH Medicaid results were 8 percentage points lower than the commercially insured.
- Preventive Screening percentages for breast cancer and cervical cancer steadily increased over the 3 measurement years for the NH Medicaid population. Compared to the NH commercially insured population, however, results for the NH Medicaid population were significantly below the NH commercially insured results.

- Colorectal cancer screening percentages were relatively low for the NH Medicaid population. In comparison to the NH commercially insured population, the NH Medicaid result was 3.5 percentage points lower than NH commercially insured in 2006. Despite being lower than the commercially insured result, the NH Medicaid colorectal results have increased significantly from 2004 to 2006.
- Prostate cancer screening percentages were low for the NH Medicaid population. The NH commercially insured population results were 3 times higher than results seen for the NH Medicaid population.
- While Statewide preventive care for the NH Medicaid diabetic population was found to be at or higher than national Medicaid benchmarks for the 4 diabetic preventive measures evaluated in this study, examining the geographic area variations across the NH Health Analysis Areas (HAAs) found that the northern NH HAAs of Lancaster, Colebrook and Berlin were commonly among the highest performing HAAs on 4 diabetic preventive care measures.
- Geographic variation in NH Medicaid preventive care results was very wide for a number of measures. Measures with the largest range in geographic variability were: Appropriate use of medications for asthmatic patients (highest HAA Peterborough at 83 percent, lowest HAA Colebrook at 33 percent); Breast cancer screening (highest HAA Franklin at 67 percent, lowest HAA North Conway at 36 percent), and Colorectal cancer screening (highest HAA Lebanon at 43 percent, lowest HAA Peterborough at 14 percent).

Limitations:

This study is based primarily on administrative claims data. Administrative claims data is collected primarily for the purpose of making financial payments. Specific provider, diagnosis, and procedure coding are typically required as part of the financial payment processes. The use of claims data is an efficient and less costly method to report on health care utilization and payments than other methods such as surveys or patient chart audits. Administrative claims data may under-report some diagnostic conditions or services; however, some studies indicate that administrative claims data may provide a more accurate rate than medical chart review. In addition, the Commercial insurance population contains information on only those residents whose claims are included in the NH Comprehensive Health Care Information System (CHIS) database, which includes members whose policies were purchased in New Hampshire. Residents with insurance policies written out-of-state are not included in the NH CHIS database.

For each of the 10 measures evaluated in this study, the same reporting year specifications (2005) were used to measure all three measurement years to allow for more consistent trending. Because measurement specifications were fixed over three-year measurement time periods, HEDIS-based measure results for these populations, reported in this study, may vary from the results reported in other analyses that may rely on reporting specifications from other years.

Lastly, one of the preventive service measures, cervical cancer screening, requires three years of data following the precise HEDIS specifications. To permit the reporting of three data years of Medicaid population results for this study, the recommend three-year analysis period was reduced to two years.

INTRODUCTION

Background

Preventive health care has been recognized as key to avoiding many life threatening illnesses and, therefore, to better manage health care costs. Preventive care is particularly important in the age 19-64 adult population analyzed in this study. An analysis by the National Center for Injury Prevention and Control² of 10 leading causes of death in New Hampshire's adult-aged population found that cancers (malignant neoplasms) and heart disease were the two leading causes of death for three adult age groups: 35-44, 45-54, 55-64. The same study indicated that chronic respiratory disease and diabetes were, respectively, the third and fourth leading causes of death for New Hampshire's 55-64 adult age group.

In 2007, the Partnership for Prevention program estimated the impact of increasing preventive testing from current levels to a higher goal at the 90 percent level.³ The study concluded that "There is the potential to save 100,000 lives annually by increasing use of just 5 preventive services. It would also lead to more effective use of the nation's resources because the United States would get more value—in terms of premature death and illness avoided—for the dollars it spends on health care services." The five preventive services analyzed in the Partnership for Prevention study included breast cancer screening, colorectal cancer screening, aspirin-treatment for heart disease, flu prevention, and advising smokers to quit.

A number of nationally-recognized organizations have published recommendations for preventive health care services for the adult-aged population. As a sampling of these recommendations, Appendix 1 contains copies of recommended preventive care guidelines and timelines for New Hampshire from the Foundation for Healthy Communities and from the Agency for Healthcare Research and Quality, Massachusetts Health Quality Partners, and the Gundersen Lutheran Health Plan.

This study was designed to assess preventive health services and testing being provided to New Hampshire's Medicaid adult-aged population between the ages of 19 and 64. Given the leading health challenges faced by this adult age group, as introduced above, this study has selected 10 preventive care services and tests associated with these health conditions. The 10 measures are defined and described in the next section of this report. Preventive measures selected for this study are based upon nationally-recognized measures. Specifications for each measure are fully documented by the national health quality measurement organizations NCQA (National Center for Quality Assurance) and USPSTF (U.S. Preventive Services Task Force).

Using experience gained from related CHIS research conducted in 2006/07, this study analyzes NH Medicaid claims data to assess a set of 10 preventive care measures specific to the

² National Center for Injury Prevention and Control, *10 Leading Causes of Death, New Hampshire, 2000-2007, All Races, Both Sexes*. U.S. Centers for Disease Control; Atlanta, GA. 2007.

³ National Commission on Prevention Priorities. *Data Needed to Assess Use of High-Value Preventive Care: A Brief Report from the National Commission on Prevention Priorities*. Partnership for Prevention, August 2007.

NH Medicaid adult-aged population for the measurement time periods ending in the three calendar years 2004-2006. Measurement results for the NH Medicaid adult population in each of the three time periods are reported, as well as the trends over the total time span, including an assessment of statistically significant increasing or decreasing trends.

In addition to measuring adult preventive services for the New Hampshire adult Medicaid population, this study will measure and compare adult preventive service metrics for New Hampshire’s commercially insured population.

Preventive Testing Measures Covered in this Study

This study was designed to assess 10 preventive testing measures. Of the 10 measures, five of the measures are preventive care access and screenings that are recommended for all people who are within certain age ranges. One of the measures is specific to adult patients with asthma as a chronic disease. Four of the measures are specific to patients with diabetes as a chronic disease.

Shown on Table 1 are the 10 preventive testing measures evaluated for this study that can be measured using health claims data. The table displays the preventive measure name, the source of the analysis specifications that were used for this study, the principal organization(s) that developed/endorse the measure and its analysis specifications, and the number of years of data that were analyzed to compute the measure for this study.

Table 1. Preventive testing measures included for this study

Preventive Testing Measures Included in this Study	Measurement Specification Source*	Endorsing Organization*	Years of Data Analyzed in Measurement Period
Adults Enrollees within appropriate age ranges:			
Access to Preventive/Ambulatory Care	HEDIS	NCQA	1
Breast Cancer Screening	HEDIS	NCQA, NQF, USPSTF	2
Cervical Cancer Screening	HEDIS	NCQA	2
Colorectal Cancer Screening	HEDIS	NCQA, NQF, USPSTF	2
Prostate Cancer Screening	Derived from USPSTF	USPSTF	1
Adult Asthma Disease Patients:			
Use of appropriate medication	HEDIS	NCQA, NQF	2
Adult Diabetic Patients:			
HbA1C Test	HEDIS	NCQA	2
LDL-C Screen	HEDIS	NCQA	1
Eye exam	HEDIS	NCQA	1
Monitoring for Nephropathy	HEDIS	NCQA	1

* HEDIS = Healthcare Effectiveness Data and Information Set managed by NCQA.
 NCQA = National Committee for Quality Assurance.
 USPSTF = US Preventive Services Task Force.
 NQF = National Quality Forum.

Most of the measures assessed in this study are based upon the Healthcare Effectiveness Data and Infor-

mation Set, or HEDIS⁴. The HEDIS metrics were originally developed and are updated annually by the National Center for Quality Assurance, or NCQA. The HEDIS measurement set contains a large array of metrics designed to measure a large spectrum of health care delivery performance by health care providers and health care insurers. The full set of HEDIS measures includes well over 300 separate measures of health quality, access, and delivery system performance. Each of the HEDIS access and quality measures are based upon leading clinical practice standards and recommendations for high-quality care.

The HEDIS measures are well documented in technical specification manuals that receive annual updates by NCQA. As will be discussed in the Data Limitations section, the published HEDIS measure technical specifications served as the basis for the analysis in this study on which several analytical adjustments were made.

With the exception of the Appropriate Use of Medications by People with Asthma and the Colorectal Cancer Screening measures, this study analyzed data based upon the HEDIS measure technical specifications published for HEDIS 'reporting year' 2005 in order to allow for the comparison of NH preventive testing results over time measured with the same analysis specifications. These specifications were appropriate for the diagnosis and procedure coding systems that were in use during the time period 2003-2004. For all measures except the Appropriate Use of Medications by Asthmatics and the Colorectal Cancer Screening measures, this study applied the HEDIS reporting year 2005 analysis specifications to compute results for measurement years 2004, 2005, and 2006.

NCQA made significant revisions to the Appropriate Use of Medications by Asthmatics measure and the Colorectal Cancer Screening measure for reporting year 2007. Revised specifications changed the definition for asthmatic patients as well as the listing of appropriate medications. For the Colorectal Cancer Screening measure, the revisions focused the identification of colorectal screening procedures to diagnostic-only screenings. In order to show comparable trends for these two measures, this study applied the HEDIS reporting year 2007 analysis specifications to compute results for measurement years 2004, 2005, and 2006.

Several necessary departures from precise HEDIS measure specifications were made in this analysis to adjust for unique data coding issues found in the NH claims data. Analysis specifications adjustments were needed to restrict measurement time periods for one of the measures, cervical cancer, from HEDIS-specified three-years to two-year periods. This adjustment was needed in order to incorporate at least one data point for the NH commercially insured population, where data were available for only 2005-2006.

The NH CHIS claims database contains claims records for NH Medicaid members beginning in January 2003. Since several of the selected preventive testing measures required two years of data, the first possible year of measurement for the Medicaid population was measurement year 2004 (using data from 2003-2004).

Collection of claims records for the NH Medicaid insured population began in January 2003. For the Medicaid insured, this study could assess one-year-based or two-year-based preventive care measures for measurement years 2004, 2005, and 2006. However, collection

⁴ HEDIS is a registered trademark of the National Center for Quality Assurance (NCQA).

of claims records for the NH commercially insured population began in January 2005. For the commercially insured, this study could assess one-year-based preventive care measures for measurement years 2005 and 2006. However, assessment of two-year-based preventives care measures was possible only for measurement year 2006.

Populations Covered in this Study

This study evaluated preventive care access and testing for two population groups, the NH Medicaid covered population and the NH commercially insured population. The NH Medicaid Program defines adult age as beginning at age 19. For this study, the Medicaid population was defined as the adult-aged Medicaid enrollees between the ages of 19-64 as of the last day of the data year being measured.

Several enrollee exclusions were made from the full set of adult enrollees. Although a number of Medicaid enrollees are aged 65 or older, Medicaid enrollees over the age of 65 generally have incomplete claims data sets in the CHIS database since a portion of their claims has been paid by the Medicare Program. Medicare claims are not available for study through the NH CHIS database. Therefore, the age range in this study was limited to adults under age 65.

Secondly, Medicaid adult enrollees in the 19-64 age group who had dual health coverage with Medicare were excluded since any Medicare-paid health claims records would not be available for study.

Thirdly, to be included in the eligible populations for the measures in this report, Medicaid or commercially insured enrollees needed to be enrolled continuously during the time period of the measure. Enrollees who were not continuously enrolled during the time period of the measure were excluded.

The commercially insured population was defined as the commercially insured (i.e. non-governmental health insurance) NH residents who were aged 19-64 on the last day of the day year being measured. Commercially insured claims records in the CHIS database include all claims for enrollees where the health insurance policy was written in NH. A portion of the claims in the commercially insured CHIS database are associated with people residing outside NH. Claims belonging to NH non-residents were excluded from the analysis.

For the adult access to preventive and ambulatory care measure, the specifications for the measure deviate from the usual 19-64 age range by evaluating the 20-64 age group. Where HEDIS measure age group deviations depart from the usual 19-64 age range, this study followed the HEDIS specifications in order to provide valid comparisons to HEDIS benchmarks.

Lastly, because claims record sets may be incomplete for some enrollees in Indemnity-type health insurance plans, Indemnity plan enrollees were excluded from the analysis of the commercially insured NH population.

Data Limitations

This study was based primarily on administrative claims data. Administrative claims data are collected largely for the purpose of making financial payments. Specific provider, diagnosis and procedure coding are typically required as part of the financial payment process. Although the use of claims data is an efficient and less costly method of analyzing and reporting on health care utilization and payments compared to other methods such as surveys and medical record chart reviews, administrative claims may under-report some diagnostic conditions and procedures provided to patients.

The New Hampshire CHIS commercial population contains information on those residents whose claims are included in the NH CHIS database, which generally only includes members whose policies were purchased in New Hampshire. Areas close to the borders of New Hampshire may be less well represented than areas in the interior. Additionally, companies that self-fund their health care and do not use a TPA to pay claims are not captured in the data set.

For the HEDIS-based and USPSTF-based measures included in this study, use of administrative claims data may slightly under-report levels of results that may exist if full medical record reviews in physician offices were incorporated into the analysis process.

To hold measurement specifications constant over the three measurement time periods, specifications for all measures except the Appropriate Use of Medications by Asthmatics and the Colorectal Cancer Screening measure were based upon the specifications for the HEDIS 2005 reporting year. As mentioned above, in reporting year 2007, significant revisions were made to the Appropriate Use of Medications by Asthmatics and Colorectal Cancer Screening measures. Because of the recent 2007 specification changes, specifications for the HEDIS 2007 reporting year were used for these two measures.

For each of the 10 measures evaluated in this study, the same reporting year specifications were used to measure all three measurement years. The authors recognize that, normally, analysis specifications change each year as new diagnosis and procedure codes are added or deleted, and as updated clinical recommendations are incorporated into the analysis specifications.

Because measurement specifications were fixed over three-year measurement time periods, HEDIS-based measure results for these populations, reported in this study, may vary from the results reported in other analyses that may rely on reporting specifications from other years.

Lastly, one of the preventive service measures, cervical cancer screening, requires three years of data following the precise HEDIS specifications. To permit the reporting of three data years of Medicaid population results for this study, the recommend three-year analysis period was reduced to two years.

RESULTS

General Organization of Preventive Testing Findings

In the pages that follow, findings summaries are provided for each of the 10 adult preventive care measures. Each of the measure summaries generally includes three charts. The first chart displays information on preventive measure trends over the three measurement years 2003, 2004, and 2005 for NH Medicaid adults. Annotated on the three-year Medicaid trend chart is the 2006 national U.S. average for the measure for Medicaid Plans, as reported by the NCQA⁵. Any changes in NH Medicaid results between measurement year 2004 and measurement year 2006 were analyzed to determine if the change was statistically significant. Results of the statistical analysis are reported in the summary narrative.

The second chart displays the three-year NH Medicaid results in comparison to NH commercially insured adults for those data years where commercially insured data were available (generally 2005 and 2006 measurement years). The first year of CHIS data for NH commercially insured was data year 2005. Thus, for one-year-based measures, two data points are provided for the commercially insured (measurement years 2005, 2006), and for two-year-based measures one data point is provided for the commercially insured (measurement year 2006).

A third chart shows the adult preventive measure results for NH Medicaid adults residing in each of 22 NH Health Analysis Areas (HAAs). HAA-specific results are sorted from the HAA with the highest percentage on the measure to the area with the lowest percentage. The NH Statewide percentage is provided as a reference point on the far right of the chart.

⁵ Medicaid HEDIS 2006 Means, Percentiles and Ratios; NCQA Quality Compass.

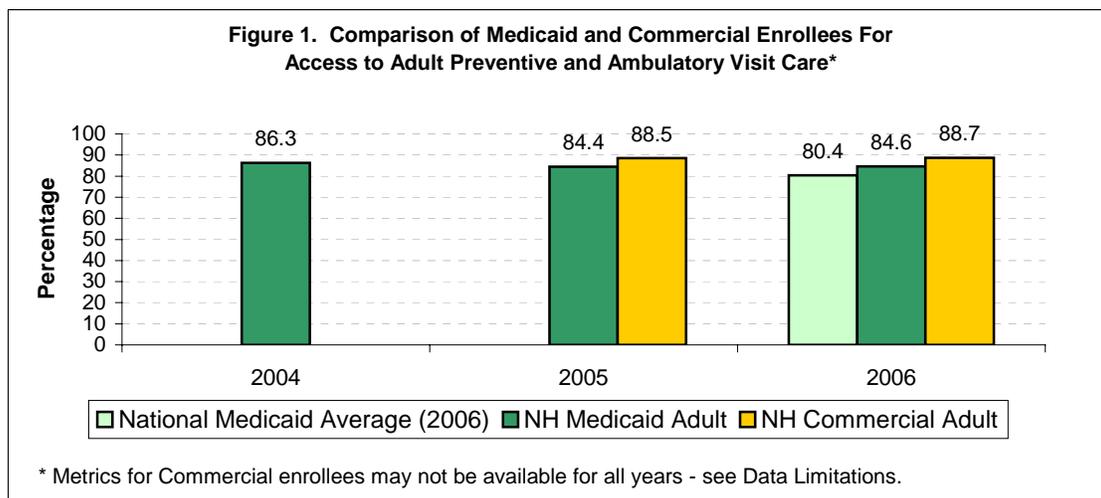
Adult Access to Preventive/Ambulatory Care

In the most recent data year of measurement, 2006, NH Medicaid provided health care services to 20,137 adult enrollees aged 19-64 who were eligible to seek preventive care and ambulatory visit services.

The HEDIS-based measure specifications for the adult access to preventive care and ambulatory services measure begins at age 20 rather than 19. To allow for comparisons to national Medicaid benchmarks and NH commercial benchmarks, this measure was assessed for the age range 20-64

Definition of the measure. The percentage of enrollees aged 20-64 who had a preventive care or ambulatory care visit during the measurement year or the prior year. Shown in the findings section below are trends, comparative results, and geographic area variations for the full 20-64 age group. Following the findings for the 20-64 age group are Medicaid adult access figures for two sub-groups ages 20-44 and 45-64.

Findings. Shown in the chart below (Figure 1) are NH Medicaid trends for adult access to preventive care and ambulatory visit services for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.

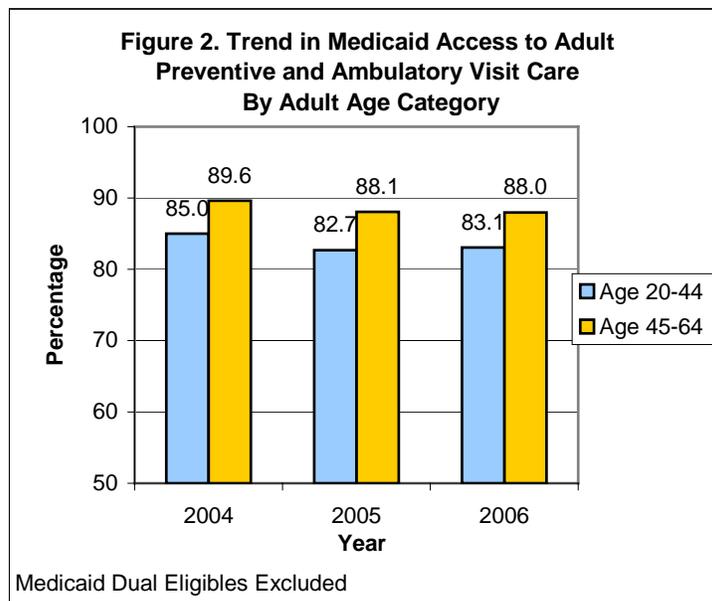


The percentage of NH Medicaid adult enrollees receiving access to preventive care is relatively high, varying within a range of 84 to 86 percent over the three measured years. The nearly 2 percentage point decrease in the NH Medicaid percentage from 2004 to 2006 was a statistically significant change (95 percent CL, $p < .05$). The NH Medicaid percentage for the most recent year, 2006, was approximately 4 percentage points higher than the national Medicaid average of 80 percent for adult access to preventive and ambulatory visit care.

Compared to the adult commercially insured population, the NH Medicaid adult enrollees access to care results are similar, but were slightly below the commercial results. In both

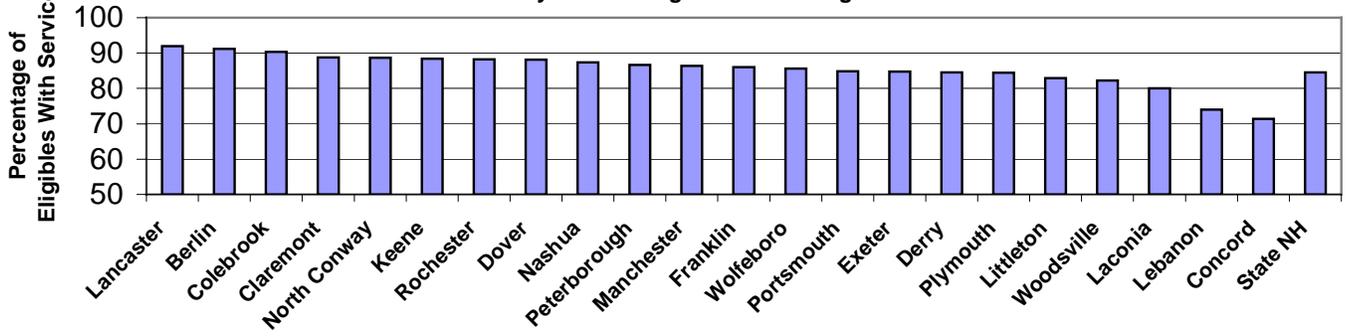
2005 and 2006, adult access to preventive care services for NH Medicaid adults was approximately 4 percentage points below the result for commercially insured adults. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are significantly lower (95 percent CL, $p < .05$) than the results found for the commercially insured.

The HEDIS-based access to preventive care and ambulatory visits measure is also computed for two adult age groups: 20-44 and 45-64. Figure 2 displays the findings for the NH Medicaid population after splitting the full 20-64 age group into these two sub age groups. In all three measurement years, the access to care percentage for the younger 20-44 adult age group was approximately 5 percentage points below the access to care percentages for the older 45-64 adult age group. This pattern of slightly lower access to care percentages for the younger 20-44 adult age group was also seen for the NH commercially insured population.



Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 3 are NH Medicaid adult access to preventive care percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.

Figure 3. 2006 Medicaid Access to Adult Preventive and Ambulatory Visit Care By NH Health Analysis Areas
Sorted by Descending HAA Percentages



Medicaid Dual Eligibles Excluded

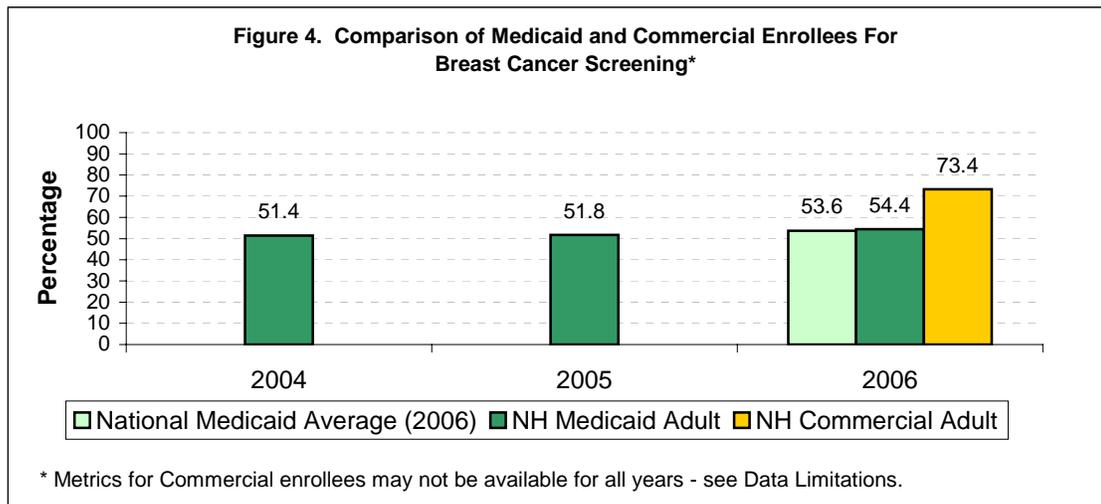
NH Medicaid adult access to preventive care services percentages were fairly uniform across the 22 NH HAAs, ranging from a high of 92 percent for the Lancaster HAA to 80 percent for the Laconia HAA. Only two HAAs had Medicaid adult access to preventive care percentages that were below 80 percent. These HAAs were the Lebanon HAA at 74 percent and the Concord HAA at 71 percent. This study is unaware of any drivers for the lower percentages for the Concord and Lebanon HAAs. Further research may be warranted to understand the reasons for the lower percentages in the Lebanon and Concord HAAs.

Breast Cancer Screening

In the most recent data year of measurement, 2006, NH Medicaid provided health care services to 1,466 adult women enrollees aged 52-69, the HEDIS-specified age group recommended to seek breast cancer screening services. During 2006, 96 women covered by NH Medicaid were being treated for breast cancer. Prior to data year 2006, HEDIS evaluated breast cancer screening for the highest-risk age range 52-69. Post 2006, HEDIS lowered the breast cancer screening age range to 42-69.

Definition of the measure. The percentage of women aged 52-69 years of age who had a mammogram during the measurement year or the year prior (i.e. each year charted reflects a two-year measurement time span). Please note that since this measure is based upon two years of data, and the first year of data for the commercially insured is 2005, only a single time period, 2005-2006, could be assessed for the commercially insured population.

Findings. Shown in the chart below (Figure 4) are NH Medicaid trends for breast cancer screening services for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.

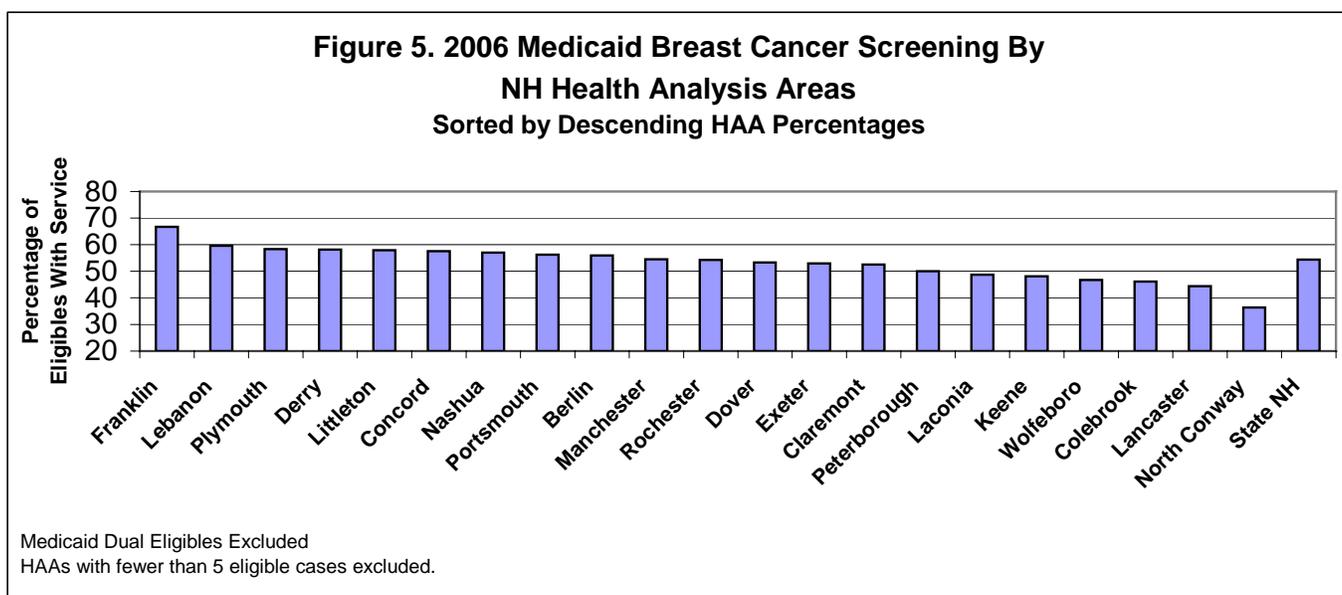


The percentage of eligible NH Medicaid adult enrollees receiving breast cancer screening increased steadily from 51.4 percent in 2004 to 54.4 percent in 2006, or a 3 percentage point increase over the three years. The increase in the NH Medicaid breast cancer screening percentage from 2004 to 2006 was not a statistically significant change (95 percent CL, $p < .05$). The NH Medicaid percentage for the most recent year, 2006, was approximately 1 percentage point higher than the national Medicaid average for breast cancer screening.

Because the specifications for calculating this measure require two years of data, and the collection of claims for the NH population began in 2005, this study assessed the breast

cancer screening measure only for the 2006 data year for the commercially insured population. The breast cancer screening percentage for the commercially insured population in data year 2006 was 73.4 percent, or nearly 20 percentage points higher than the NH Medicaid population. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are significantly lower (95 percent CL, $p < .05$) than the results found for the commercially insured.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 5 are NH Medicaid breast cancer screening percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.



NH Medicaid breast cancer screening service percentages by HAA varied from a high of 67 percent in the Franklin HAA to a low of 36 percent on the North Conway HAA. Even the highest percentage in the Franklin HAA was below the average breast cancer screening average for the commercially insured population. Reasons for the low screening rates in comparison to the commercially insured population should be investigated in further research.

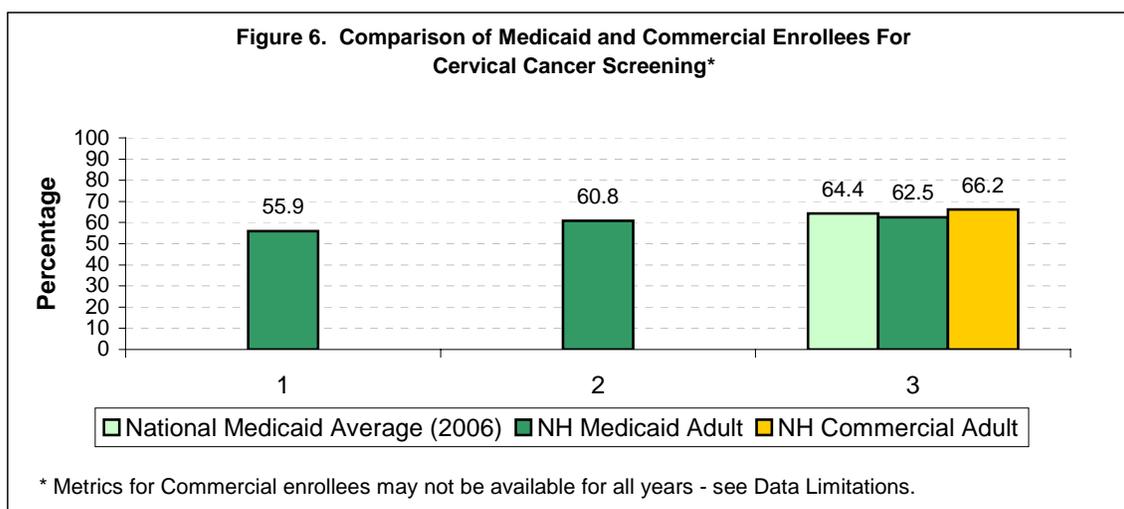
The North Conway result was 8 percentage points below the next lowest Lancaster HAA. Further research may be warranted to understand the reasons for the lower NH Medicaid breast cancer screening percentages in the North Conway HAA.

Cervical Cancer Screening

In the most recent data year of measurement, 2006, NH Medicaid provided health care services to 14,440 adult women enrollees aged 21-64, the HEDIS-specified age group recommended to seek cervical cancer screening services. During 2006, 32 women covered by NH Medicaid were being treated for cervical cancer.

Definition of the measure. The percentage of women aged 21-64 who received one or more cervical cancer tests during the measurement year and the year prior (i.e. each year charted reflects a two-year measurement time span). Please note that since this measure is based upon two years of data, and the first year of data for the commercially insured is 2005, only a single time period, 2005-2006, could be assessed for the commercially insured population.

Findings. Shown in the chart below (Figure 6) are NH Medicaid trends for cervical cancer screening services for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.

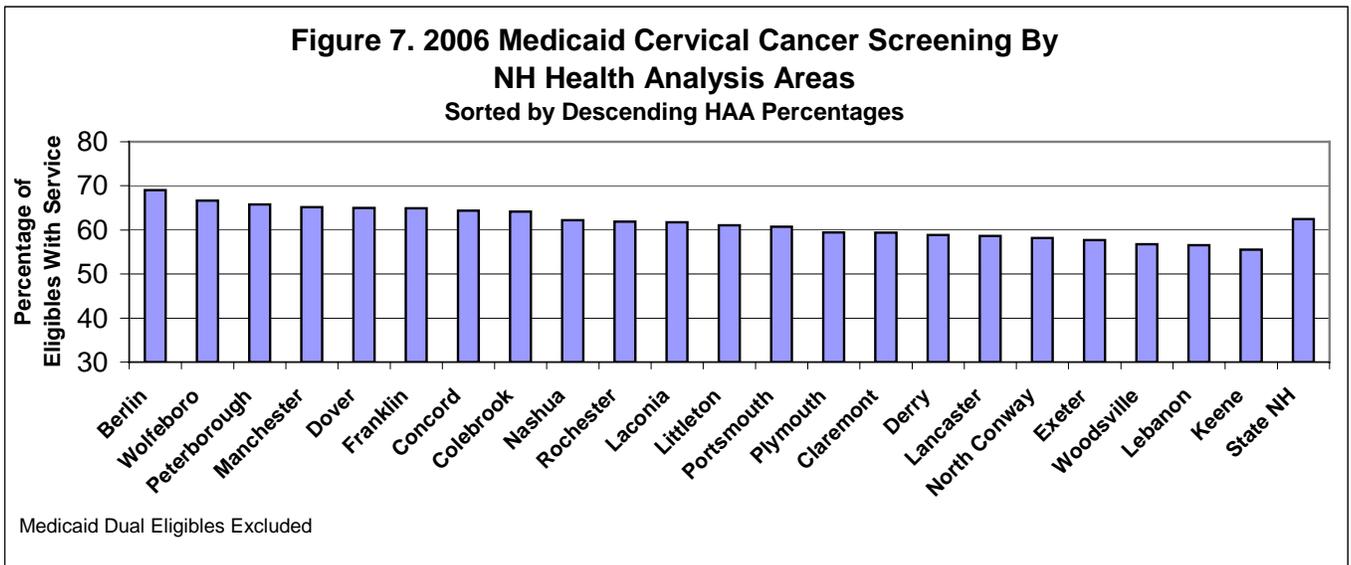


The percentage of eligible NH Medicaid adult enrollees receiving cervical cancer screening has increased steadily from 55.9 percent in 2004 to 62.5 percent in 2006. The nearly 7 percentage point increase in the NH Medicaid cervical cancer screening percentage from 2004 to 2006 was a statistically significant change (95 percent CL, $p < .05$). The NH Medicaid percentage for the most recent year, 2006, was approximately 2 percentage points lower than the national Medicaid average for cervical cancer screening.

Because the specifications for calculating this measure require two years of data, and the collection of claims for the NH population began in 2005, this study assessed the commercially insured population's cervical cancer screening measure only for the 2006 data year. The cervical cancer screening percentage for the commercially insured population in data

year 2006 was 66.2 percent, or slightly higher than the 62.5 percent for the NH Medicaid population. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are significantly lower (95 percent CL, $p < .05$) than the results found for the commercially insured.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 7 are NH Medicaid cervical cancer screening percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.



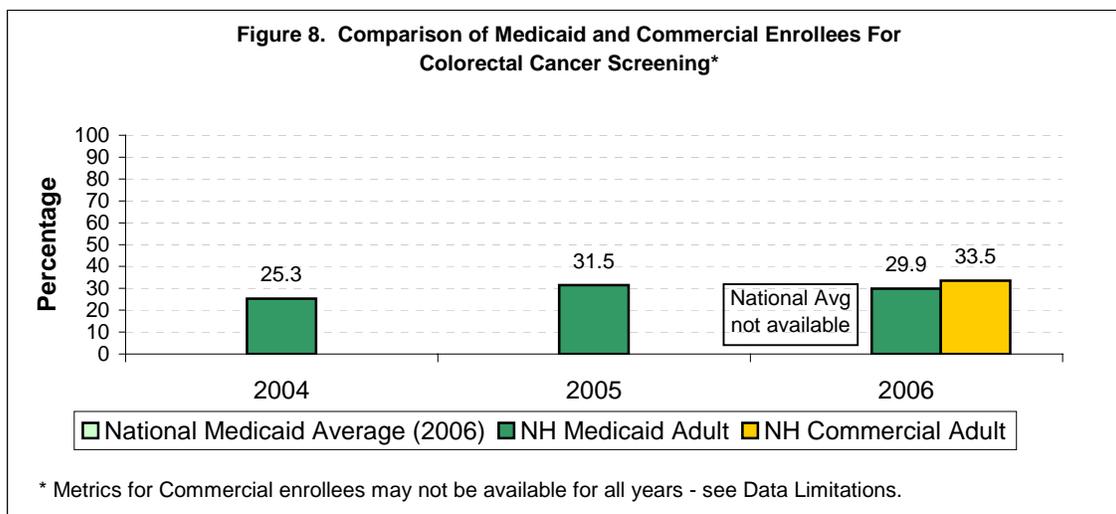
NH Medicaid cervical cancer screening percentages varied from a high of 69 percent for the Berlin HAA to 55.6 percent for the Keene HAA. Unlike the findings for breast cancer screening where the Lebanon HAA was second highest, the Lebanon HAA was second lowest in cervical cancer screening percentage. Compared to the average 66.2 percentage for the NH commercially insured population, only 2 HAAs, Berlin and Wolfeboro, exceeded this level for the NH Medicaid population.

Colorectal Cancer Screening

In the most recent data year of measurement, 2006, NH Medicaid provided health care services to 2,882 adult enrollees aged 50-64 the HEDIS-specified age group recommended to receive colorectal cancer screening services. During 2006, 65 patients covered by NH Medicaid were being treated for colorectal cancer.

Definition of the measure. The percentage of adults aged 50-64 who had an one or more of the following screenings for colorectal cancer: fecal occult blood test (FOBT) in the measurement year; or a flexible sigmoidoscopy, double contrast barium enema (DCBE), or a colonoscopy during the measurement year or year prior. Please note that since this measure is based upon two years of data, and the first year of data for the commercially insured is 2005, only a single time period, 2005-2006, could be assessed for the commercially insured population.

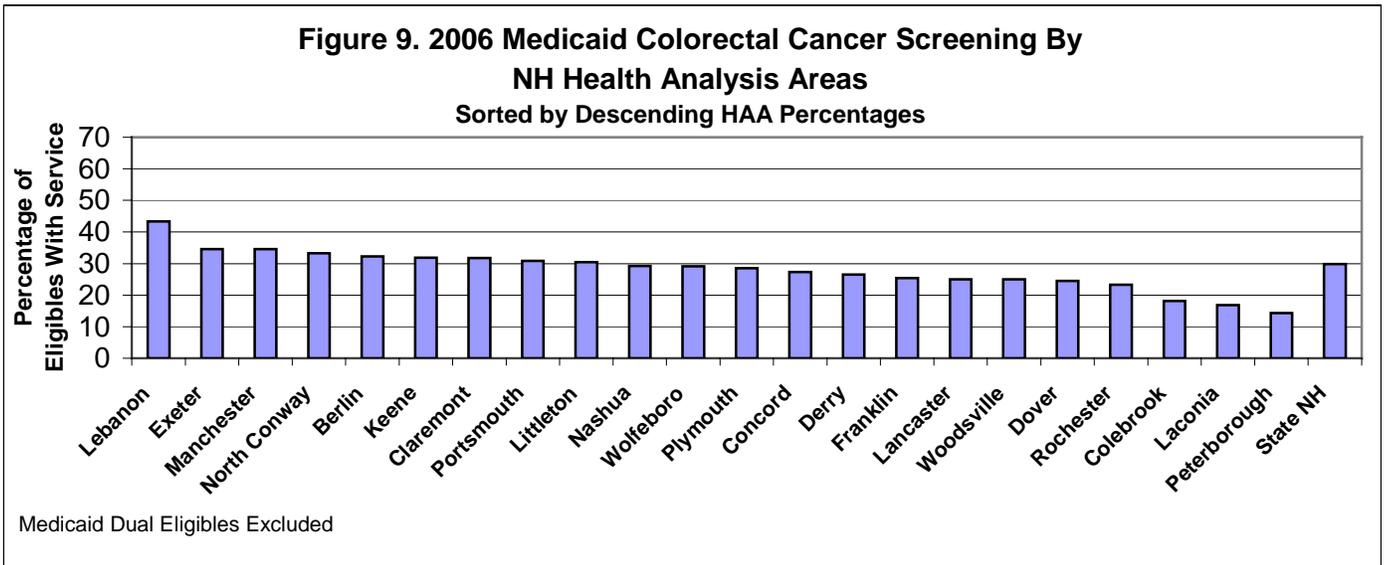
Findings. Shown in the chart below (Figure 8) are NH Medicaid trends for colorectal cancer screening services for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. National Medicaid benchmarks were not available for this measure.



The percentage of eligible NH Medicaid adult enrollees receiving colorectal cancer screening increased from 25.3 percent on 2004 to 31.5 percent in 2005, then dropped slightly in 2006 to 29.9 percent. The overall 4.6 percent increase from 2004 to 2006 was a statistically significant change (95 percent CL, $p < .05$).

Because portions of the specifications for calculating this measure require two years of data, and the collection of claims for the NH population began in 2005, this study assessed the commercially insured population's colorectal cancer screening measure only for the 2006 data year. The colorectal cancer screening service percentage for the commercially insured population in measurement year 2006 was 33.5 percent, or 3.6 percentage points above the percentage for NH Medicaid adult population. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are significantly lower (95 percent CL, $p < .05$) than the results found for the commercially insured.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 9 are NH Medicaid colorectal cancer screening percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.



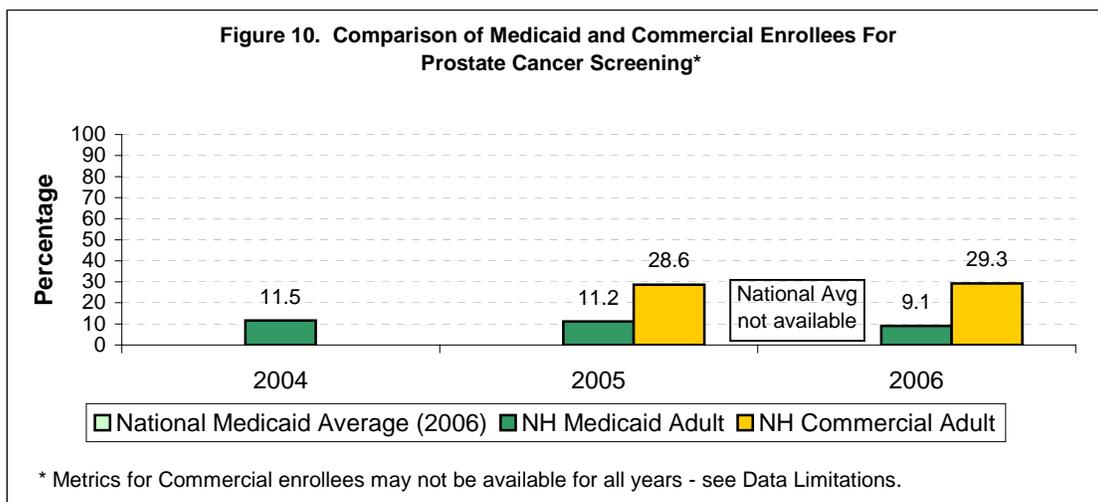
NH Medicaid colorectal cancer screening percentages varied widely from a high of 43 percent for the Lebanon HAA to 14 percent for the Peterborough HAA. Compared to the colorectal cancer screening average percentage for the NH commercially insured population of 33.6 percent, rates for three NH Medicaid areas, Lebanon, Exeter, and Manchester, exceeded the NH commercially insured average.

Prostate Cancer Screening

In the most recent data year of measurement, 2006, NH Medicaid provided health care services to 2,123 adult male enrollees aged 40-64, the HEDIS-specified age group recommended to receive prostate cancer screening services. During 2006, 16 men covered by NH Medicaid were being treated for prostate cancer.

Definition of the measure. The percentage of men aged 40-64 who had at least one PSA test in the measurement year.

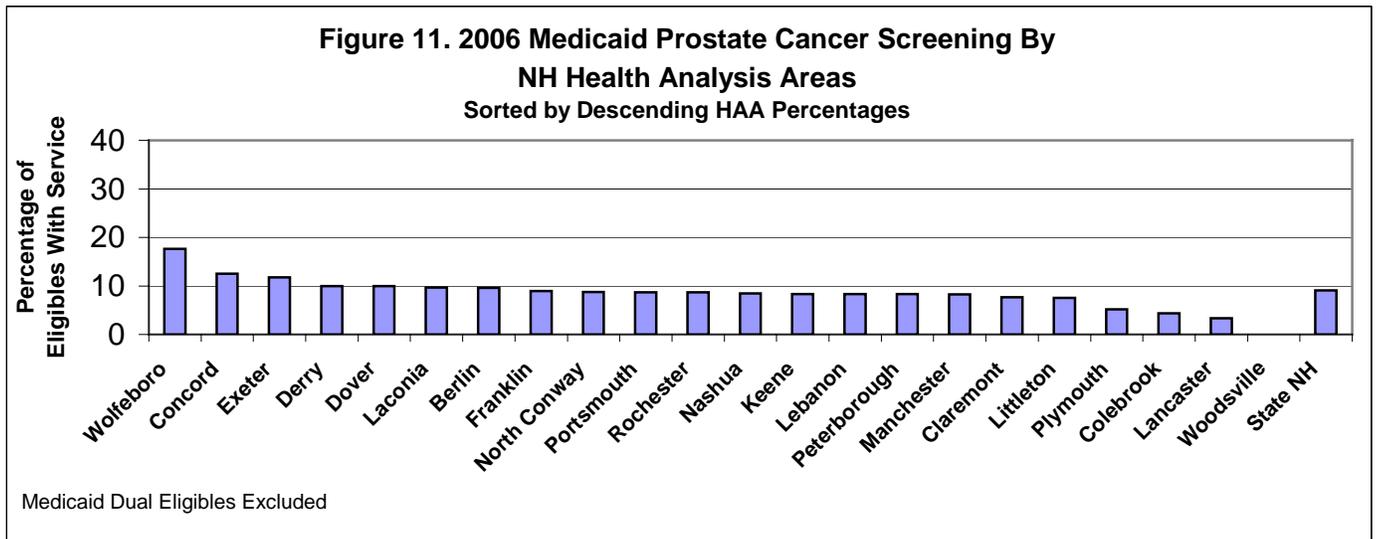
Findings. Shown in the chart below (Figure 10) are NH Medicaid trends for prostate cancer screening services for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. National Medicaid benchmarks were not available for this measure.



Shown on the same scale of percentages as used for previous adult preventive measures, the NH Medicaid population had low percentages for prostate cancer screening. The NH Medicaid population adult prostate cancer screening percentages, though low, have been fairly stable, ranging from a high of 11.5 percent in 2004 to 9.1 percent in 2006. The decrease in the NH Medicaid prostate cancer screening percentage from 2004 to 2006 was not a statistically significant change (95 percent CL, $p < .05$).

Compared to the prostate cancer screening percentage for the NH commercially insured population, NH Medicaid adults were approximately 17 percentage points below the 2005 commercially insured prostate cancer screening percentage, increasing to approximately 20 percentage points below the 2006 commercially insured prostate cancer screening percentage. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are significantly lower (95 percent CL, $p < .05$) than the results found for the commercially insured.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 11 are NH Medicaid prostate cancer screening percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.



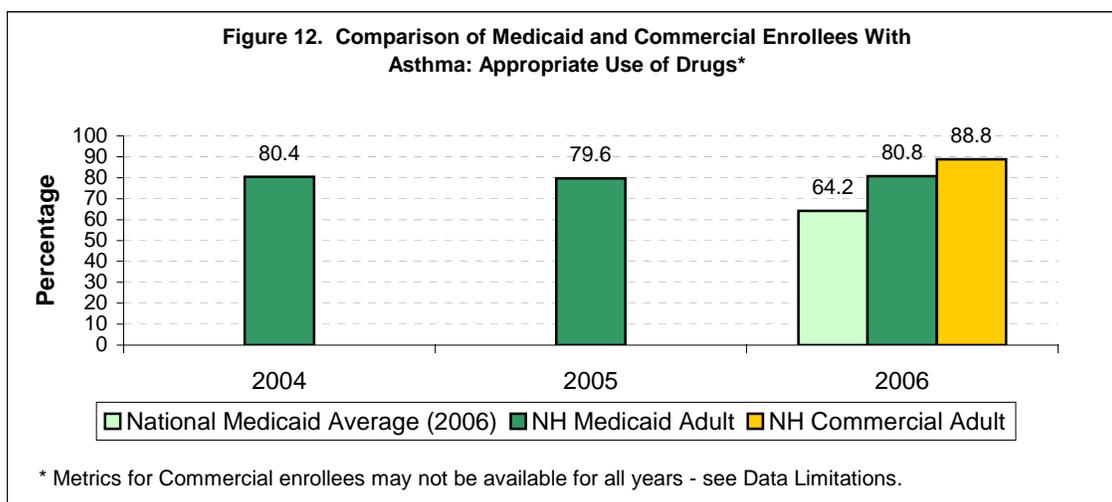
Geographic area analysis found a very wide variability in prostate cancer screening percentages. Percentages varied from a high of 18 percent for the Wolfeboro HAA to 0 percent for the Woodsville HAA. Compared to the prostate cancer screening average percentage for the NH commercially insured population, at 29.3 percent, none of the HAAs exceeded the NH commercially insured average.

Asthmatic Treatment: Appropriate Use of Drugs

In the most recent data year of measurement, 2006, NH Medicaid provided health care services to 2,172 adult enrollees with at least one claim with a primary diagnosis of asthma. During 2006, NH Medicaid paid \$69.5 million in health care claims for patients with at least one diagnosis of asthma.

Definition of the measure. The percentage of enrollees aged 19-56 who were identified as having persistent⁶ asthma during the measurement year or the year prior, and who were appropriately prescribed medication during the measurement year. HEDIS measure specifications define appropriate medications as asthmatic patients who are dispensed at least one prescription for inhaled corticosteroids, nedocromil, cromolyn sodium, leukotriene modifiers, or methylxanthines during the measurement years. Please note that since this measure is based upon two years of data, and the first year of data for the commercially insured is 2005, only a single time period, 2005-2006, could be assessed for the commercially insured population.

Findings. Shown in the chart below (Figure 12) are NH Medicaid trends for appropriate drug treatment for adult asthmatics for the three measurement years 2004 – 2006. For the year available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.

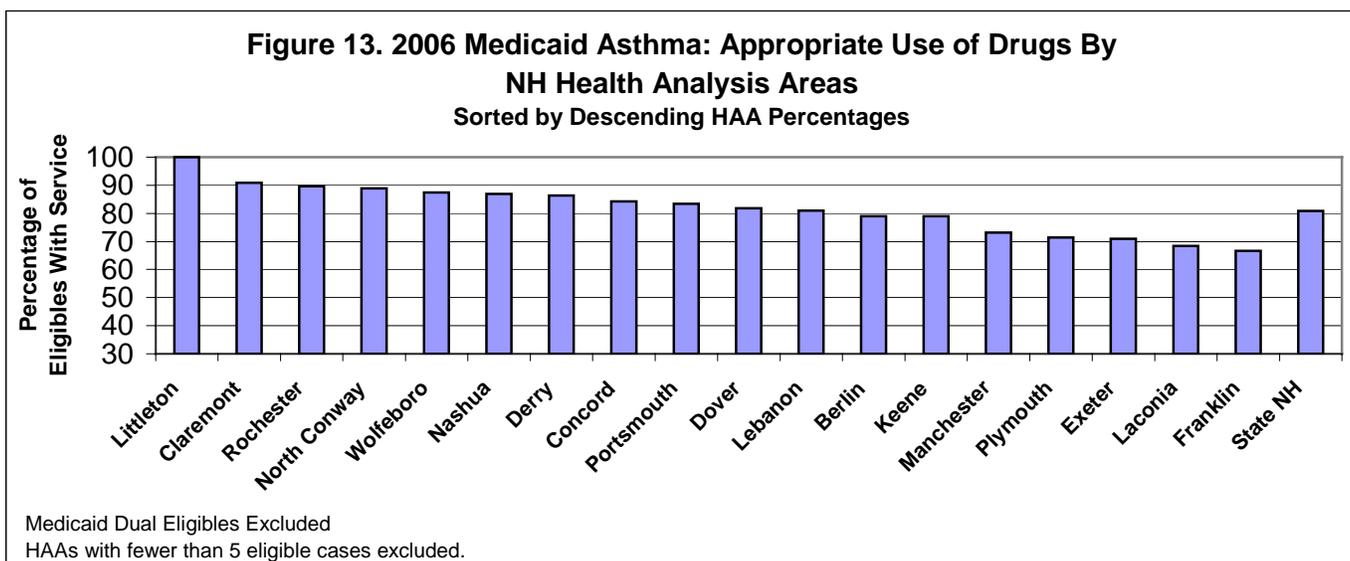


The percentage of NH Medicaid adult enrollees with asthma who received appropriate medication treatment remained steady from 80.4 percent in 2004 to 80.8 percent in 2006. The change from 2004 to 2006 was not a statically significant change. The NH Medicaid percentage for the most recent year, 2006, was approximately 17 percentage points higher than the national Medicaid average for Appropriate Use of Drugs for Asthmatic patients.

⁶ HEDIS specifications define persistent asthma as patients who met at least one of the following criteria: 1) at least one ED visit with asthma as a principal diagnosis; 2) at least one acute inpatient discharge with asthma as the principal diagnosis; 3) at least four outpatient asthma visits with asthma as one of the listed diagnoses and at least two asthma medication dispensing events; or 4) at least four asthma medication dispensing events.

Because the specifications for calculating this measure require two years of data, and the collection of claims for the NH population began in 2005, this study assessed the commercially insured population's appropriate use of drugs for asthmatics measure only for the 2006 data year. Appropriate drug treatment for asthmatics for the commercially insured population in data year 2006 was 88.8 percent, or approximately 8 percentage points higher than the NH Medicaid population. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are significantly lower (95 percent CL, $p < .05$) than the results found for the commercially insured.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 13 are NH Medicaid appropriate drug treatment for asthmatic percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.



Geographic area analysis found a very wide variability in the appropriate drug treatment for asthmatics percentages. Percentages varied from a high of 100 percent for the Littleton HAA to 67 percent for the Franklin HAA. Compared to the appropriate drug treatment for asthmatics percentage for the NH commercially insured population of 88.8 percent, the highest four NH Medicaid areas, Littleton, Claremont, Rochester and North Conway, exceeded the NH commercially insured average.

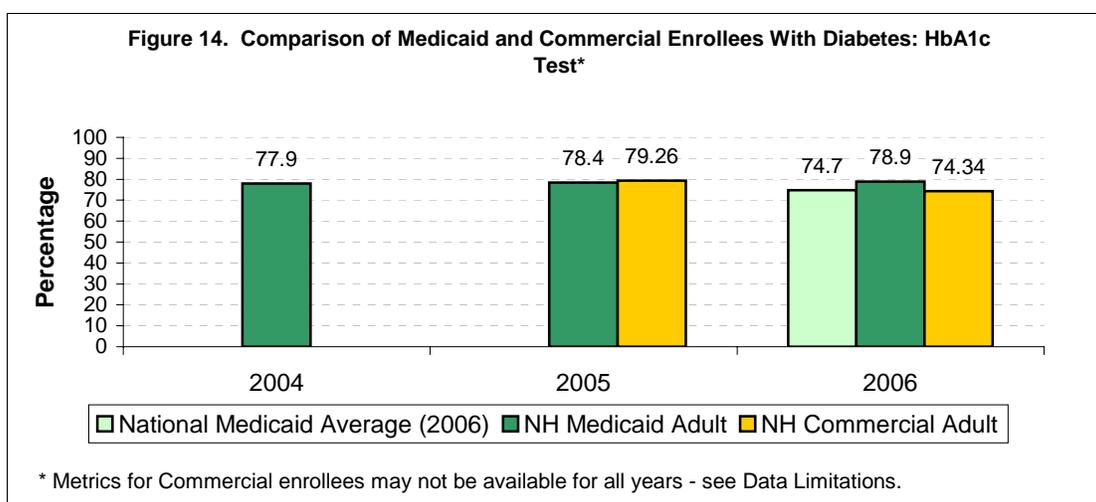
Diabetic Treatment: Overview

NH Medicaid Diabetic patients: In the most recent data year of measurement, 2006, NH Medicaid provided health care services to 2,112 adult enrollees with mention of a diabetes diagnosis. During 2006, NH Medicaid paid \$51.5 million in health care claims for patients with at least one diagnosis of diabetes. The HEDIS measurement set includes analysis specifications for a number of preventive service tests for diabetic patients, including four measures evaluated in this study: HbA1c tests, LDL-C tests, retinal eye exams, and monitoring for nephropathy.

Diabetic Treatment: HbA1c testing (blood glucose tests)

Definition of the measure. The percentage of enrollees aged 19-64 who were identified with diabetes (type 1 and type 2) during the measurement year or prior year and who had one or more blood glucose tests (HbA1c) during the measurement year.

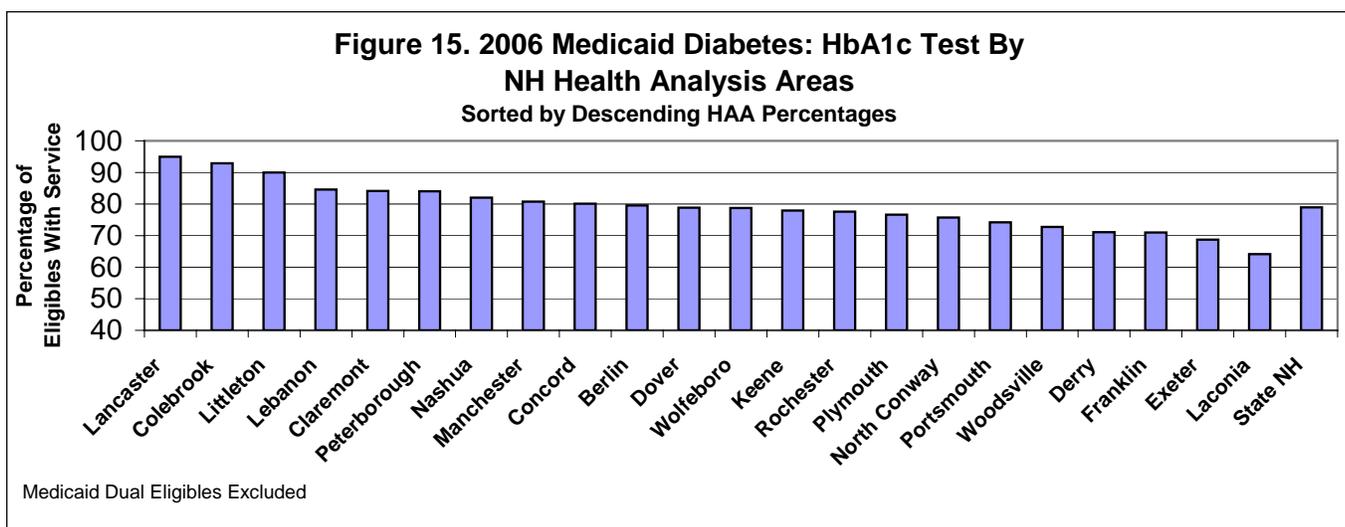
Findings. Shown in the chart below (Figure 14) are NH Medicaid trends for diabetic HbA1c test (blood glucose tests) percentages for the three measurement years 2004 – 2006. For the year available the NH Medicaid results are displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.



The percentage of NH Medicaid adult enrollees with diabetes who received one or more blood glucose tests (HbA1c) remained relatively steady, with a slight increase from 77.9 percent in 2004 to 78.9 percent in 2006. The increase in the NH Medicaid diabetic blood glucose testing percentage from 2004 to 2006 was not a statistically significant change (95 percent CL, $p < .05$). The NH Medicaid percentage for the most recent year, 2006, was approximately 4 percentage points higher than the national Medicaid average for diabetic blood glucose testing.

Over the period 2005 to 2006, blood glucose testing for diabetics for the commercially insured population declined by 5 percentage points from 79.3 percent in 2005 to 74.3 percent in 2006. The NH commercially insured result for 2005 was very close to the 2005 percentage for NH Medicaid; however, 2006 commercially insured result was just over 4 percentage points below the NH Medicaid. The 2006 NH Medicaid percentages are significantly higher (95 percent CL, $p < .05$) than the results found for the commercially insured.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 15 are NH Medicaid diabetic HbA1c test percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.

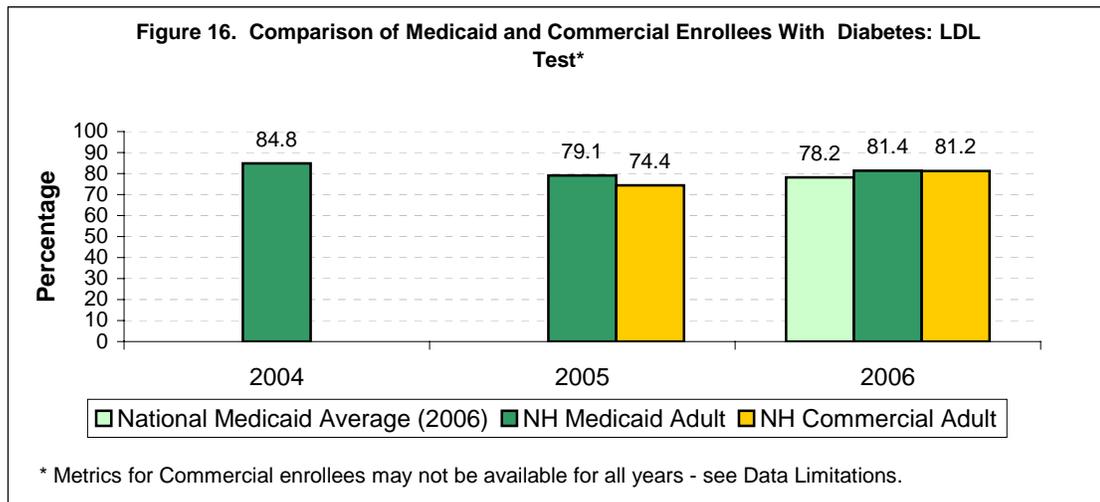


Geographic area analysis found a wide variability in diabetic HbA1c testing percentages. Percentages varied from a very high 95 percent for the Lancaster HAA and 93 percent for the bordering Colebrook HAA to 64 percent for the Laconia HAA.

Diabetic Treatment: LDL testing (cholesterol tests)

Definition of the measure. The percentage of enrollees aged 19-64 who were identified with diabetes (type 1 and type 2) during the measurement year or prior year and who had one or more cholesterol tests (LDL-C) during the measurement year or year prior.

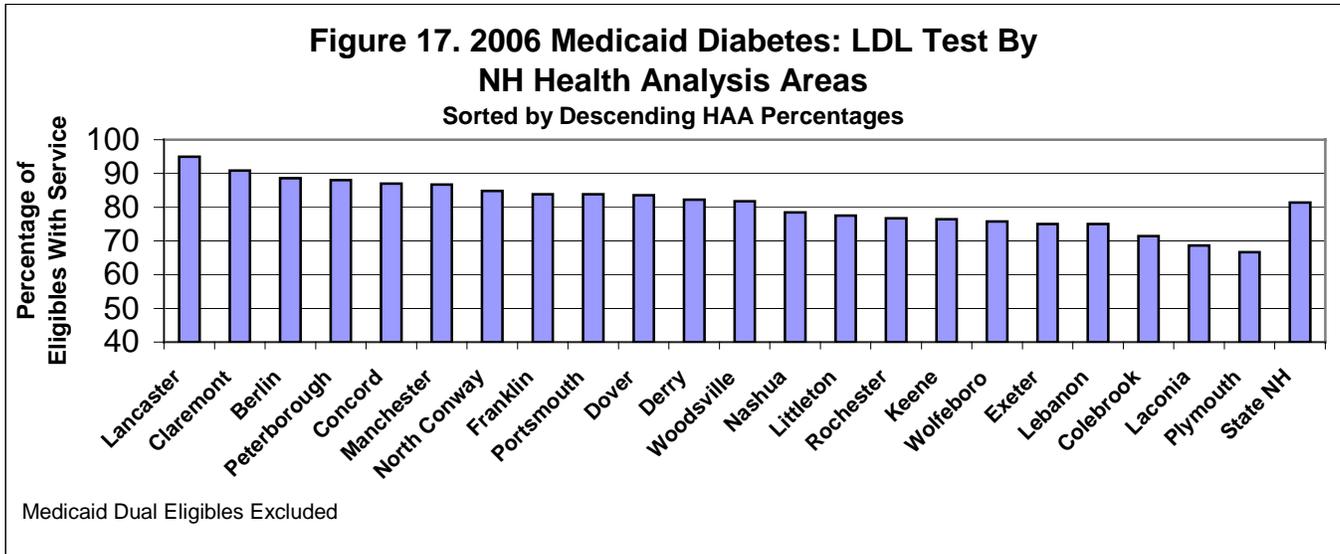
Findings. Shown in the chart below (Figure 16) are NH Medicaid trends for diabetic LDL test (cholesterol) percentages for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.



The percentage of NH Medicaid adult enrollees with diabetes who received one or more cholesterol tests (LDL-C) dropped from 84.8 percent in 2004 to 79.1 percent in 2005, then slightly increased to 81.4 percent in 2006. The 3 percentage point decrease in the NH Medicaid diabetic cholesterol testing percentage from 2004 to 2006 was not a statistically significant change (95 percent CL, $p < .05$). The NH Medicaid percentage for the most recent year, 2006, was approximately 3 percentage points higher than the national Medicaid average for diabetic cholesterol testing.

Over the period 2005 to 2006, cholesterol testing for diabetics for the commercially insured population increased by more than 6 percentage points from 74.4 percent in 2005 to 81.2 percent in 2006. The NH commercially insured result for 2005 was just over 4 percentage points below the NH Medicaid result. However, in data year 2006, the commercially insured result was very similar to the 2006 percentage for NH Medicaid result. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are not significantly different (95 percent CL, $p < .05$) from the commercially insured result.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 17 are NH Medicaid diabetic LDL test percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.

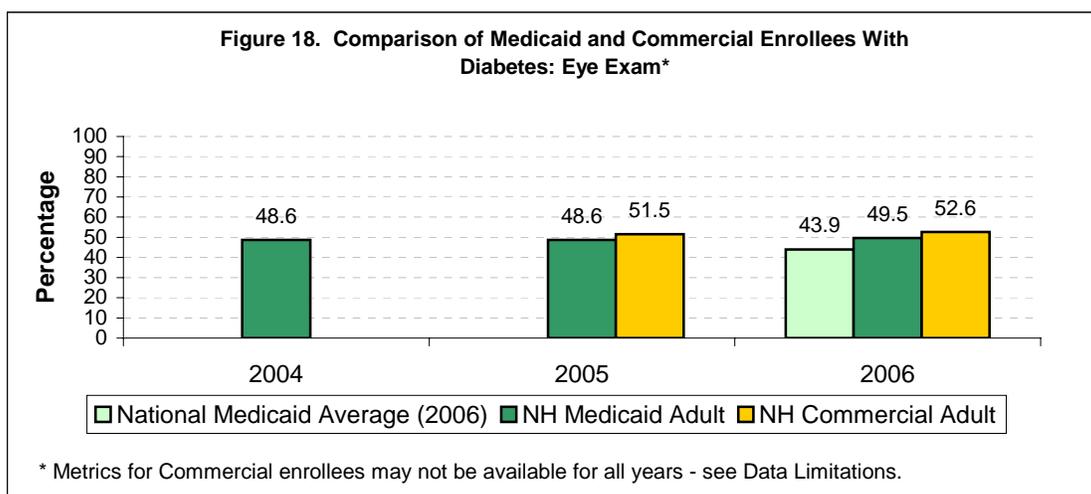


Geographic area analysis found a wide variability in diabetic LDL testing percentages. Percentages varied from a very high 95 percent for the Lancaster HAA, to 69 percent for the Laconia HAA and 67 percent for the Plymouth HAA.

Diabetic Treatment: Retinal Eye Exam

Definition of the measure. The percentage of enrollees aged 19-64 who were identified with diabetes (type 1 and type 2) during the measurement year or prior year and who had a retinal or dilated eye exam by an eye care professional during the measurement year.

Findings. Shown in the chart below (Figure 18) are NH Medicaid trends for diabetic retinal eye exam percentages for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are trends displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.

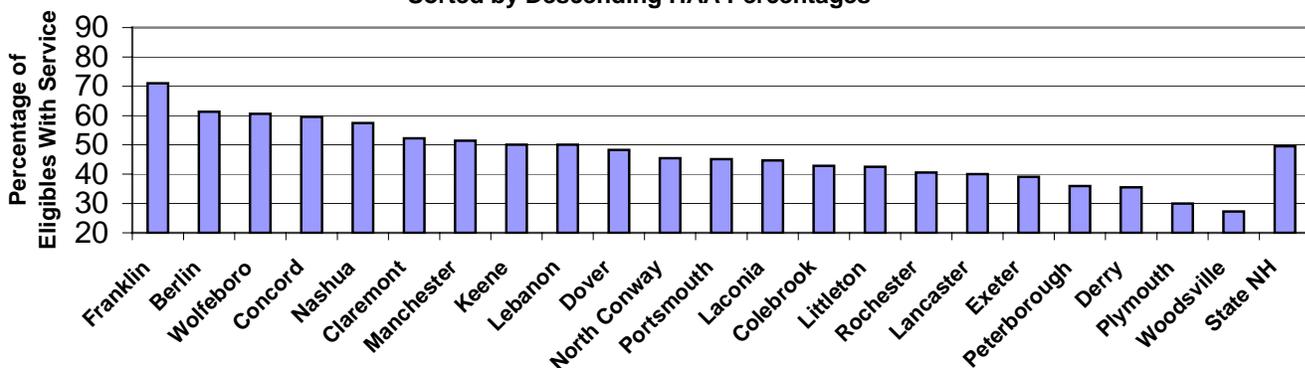


The percentage of NH Medicaid adult enrollees with diabetes who received a retinal eye exam was fairly steady, increasing from 48.6 percent in 2004 and 2005 to 49.5 percent in 2006. The increase in the NH Medicaid diabetic retinal eye exam percentage from 2004 to 2006 was not a statistically significant change (95 percent CL, $p < .05$). The NH Medicaid percentage for the most recent year, 2006, was approximately 6 percentage points higher than the national Medicaid average for diabetic eye exam testing.

Over the period 2005 to 2006, eye exams for diabetics for the commercially insured population increased by 1 percentage point from 51.5 percent in 2005 to 52.6 percent in 2006. The NH commercially insured result for 2005 and 2006 was approximately 3 percentage points above the NH Medicaid percentages in each year. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are not significantly different (95 percent CL, $p < .05$) from the commercially insured result.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 19 are NH Medicaid diabetic retinal eye test percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.

**Figure 19. 2006 Medicaid Diabetes: Eye Exam By
NH Health Analysis Areas
Sorted by Descending HAA Percentages**



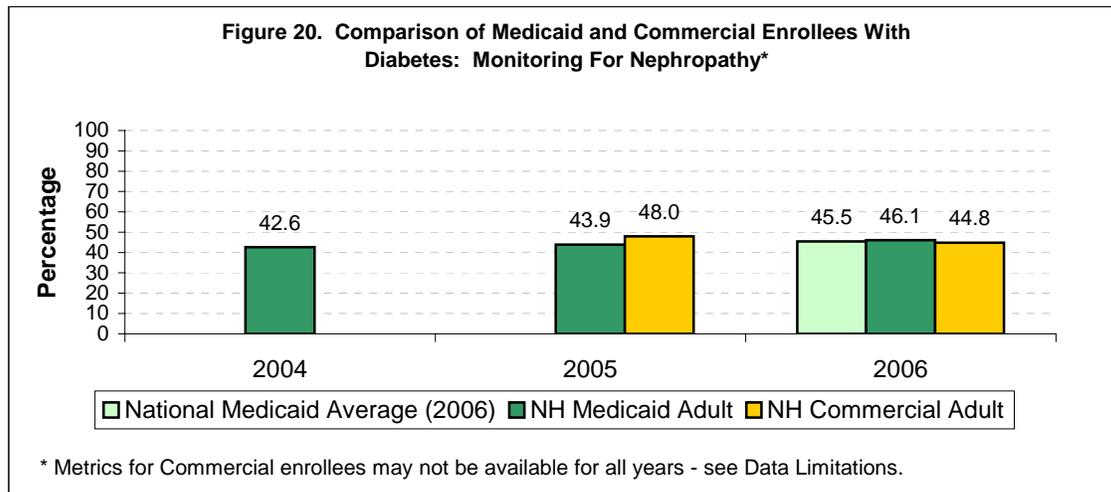
Medicaid Dual Eligibles Excluded

Geographic area analysis found a very wide variability in diabetic retinal eye exam percentages. Percentages varied from a high of 71 percent for the Franklin HAA, to less than 30 percent for the Plymouth and Woodsville HAAs

Diabetic Treatment: Monitoring For Nephropathy (kidney function)

Definition of the measure. The percentage of enrollees aged 19-64 who were identified with diabetes (type 1 and type 2) during the measurement year or prior year and who were screened for nephropathy or evidence of nephropathy⁷ during the measurement year.

Findings. Shown in the chart below (Figure 20) are NH Medicaid trends for diabetic monitoring for nephropathy percentages for the three measurement years 2004 – 2006. For the years available, the NH Medicaid results are displayed in comparison to the NH commercially insured population. As a further comparison, the national Medicaid average is shown for the most recent 2006 data year.

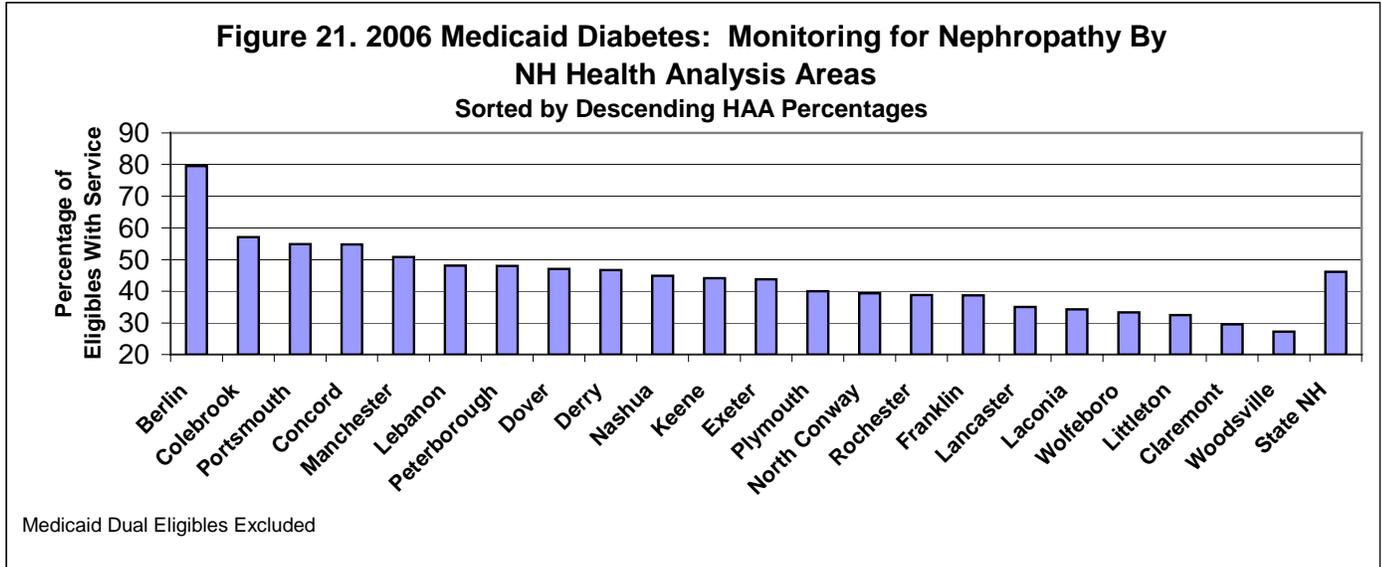


The percentage of NH Medicaid adult enrollees with diabetes who were monitored for nephropathy increased from 42.6 percent in 2004, to 43.9 percent in 2005, and to 46.1 percent in 2006. The 3 percentage point increase in the NH Medicaid diabetic monitoring for nephropathy from 2004 to 2006 was not a statistically significant change (95 percent CL, $p < .05$). The NH Medicaid percentage for the most recent year, 2006, was less than 1 percentage point higher than the national Medicaid average for diabetic eye exam testing.

Over the period 2005 to 2006, diabetic nephropathy monitoring for the commercially insured population decreased by approximately 3 percentage points from 48.0 percent in 2005 to 44.8 percent in 2006. The NH commercially insured result for 2005 was approximately 4 percentage points higher than the NH Medicaid percentage, but in 2006 was approximately 1 percentage point lower than the NH Medicaid percentage. Assessment of the statistical significance of the 2006 difference found that the NH Medicaid results are not significantly different (95 percent CL, $p < .05$) from the results found for the commercially insured.

⁷ Evidence of nephropathy is defined by HEDIS specifications as any of the following: 1) a claim with a code to indicate evidence of nephropathy during the measurement time period (see Table CDC-J in RY2007 HEDIS specifications); 2) a nephrologist visit during the measurement time period; 3) a positive macroalbumin test in the measurement time period; or 4) evidence of ACE inhibitor/ARB therapy during the measurement time period.

Geographic variability in Medicaid Adult Access to Preventive Care by Health Analysis Area (HAA). Shown in Figure 21 are NH Medicaid diabetic monitoring for nephropathy percentages by each of the NH Health Analysis Areas (HAAs, see map of NH HAAs in Appendix 2) for the most recent year of data, 2006. As a benchmark, the NH Statewide Medicaid percentage is shown on the far right of the chart.



Geographic area analysis found a very wide variability in diabetic monitoring for nephropathy percentages. Percentages varied from a high 80 percent for the Berlin HAA, to below 30 percent for the Claremont and Woodsville HAAs.

FINDINGS SUMMARY – KEY RESULTS

This study analyzed NH Medicaid claims data to assess a set of 10 preventive care measures specific to the NH Medicaid adult-aged population. NH Medicaid results for these preventive care metrics were assessed for the measurement time periods ending in the three calendar years 2004, 2005, and 2006. Where possible, results for the NH Medicaid population were compared to national averages for Medicaid populations, and to preventive care results for the NH commercially insured population.

Displayed in Table 2 are the NH Statewide results for the 10 preventive care measures in this study across the three years 2004-2006. As reviewed in previous sections, these results were compared with national benchmarks (where available) and were evaluated for each of the 22 NH HAAs.

Table 2. Summary of NH Statewide Adult Preventive Service Percentages for Medicaid and Commercially Insured Enrollees.

Preventive Testing Measures Included in this Study	Medicaid Enrollees:			Commercially Insured Enrollees:		
	2004	2005	2006	2004	2005	2006
Adults Enrollees within appropriate age ranges:						
Access to Preventive/Ambulatory Care	86.3%	84.4%	84.6%	n.a.	88.5%	88.7%
Breast Cancer Screening	51.4%	51.8%	54.4%	n.a.	n.a.	73.4%
Cervical Cancer Screening	55.9%	60.8%	62.5%	n.a.	n.a.	66.2%
Colorectal Cancer Screening	25.3%	31.5%	29.9%	n.a.	n.a.	33.5%
Prostate Cancer Screening	11.5%	11.2%	9.1%	n.a.	28.6%	29.3%
Adult Asthma Disease Patients:						
Use of appropriate medication	80.4%	79.6%	80.8%	n.a.	n.a.	88.8%
Adult Diabetic Patients:						
HbA1C Test	77.9%	78.4%	78.9%	n.a.	79.3%	74.3%
LDL-C Screen	84.8%	79.1%	81.4%	n.a.	74.4%	81.2%
Eye exam	48.6%	48.6%	49.5%	n.a.	51.5%	52.6%
Monitoring for Nephropathy	42.6%	43.9%	46.1%	n.a.	48.0%	44.8%

n.a. Measure could not be calculated because the measure requires information from multiple years of data which were not available for the NH commercially insured population - see Data Limitations.

Several key findings include the observations summarized below.

NH Medicaid adult access to preventive care and ambulatory visit services was above 84 percent in all three measurement years, and, in 2006, was 4 percentage points above the national Medicaid average. Though higher than the national Medicaid average, NH Medicaid adult access was significantly below the adult access percentage found for the NH commercially insured population by approximately 4 percentage points.

For 7 of 8 preventive care measures, where national Medicaid averages were available, NH Medicaid results were higher than the national average figures. NH Medicaid results for measurement year 2006 were higher than national Medicaid averages for: Access to preventive care and ambulatory visits; Breast cancer screening; Appropriate use of medications for patients with asthma, Diabetic blood glucose testing, Diabetic LDL testing; Diabetic retinal eye exams; and Diabetic Monitoring for Nephropathy. NH Medicaid results were slightly lower than national Medicaid averages for Cervical Cancer Screening.

This study examined 4 preventive care measures for patients with diabetes: blood glucose testing; cholesterol (LDL) testing; retinal eye exams; and monitoring for nephropathy. For all 4 measures, NH Medicaid results were above their national Medicaid averages. For the blood glucose testing measure (HbA1c), NH Medicaid's 2006 result was significantly higher than the 2006 result found for the NH commercially insured population. For the other 3 measures, NH Medicaid's 2006 result was not significantly different from the 2006 result found for the NH commercially insured population.

The percentage of asthma patients with appropriate use of medications was near 80 percent for the NH Medicaid population, and remained steady over the 3 measurement years. In 2006, the NH Medicaid percentage was well above the national Medicaid average for this measure. Compared to the NH commercially insured population, the NH Medicaid results were 8 percentage points lower than the commercially insured.

Preventive screening percentages for breast cancer and cervical cancer steadily increased over the 3 measurement years for the NH Medicaid population. Compared to the NH commercially insured population, however, results for the NH Medicaid population were significantly below the NH commercially insured results.

Colorectal cancer screening percentages were relatively low for the NH Medicaid population. In comparison to the NH commercially insured population, the NH Medicaid result was 3.5 percentage points lower than NH commercially insured in 2006. Despite being lower than the commercially insured result, the NH Medicaid colorectal results have increased significantly from 2004 to 2006.

Prostate cancer screening percentages were low for the NH Medicaid population. The NH commercially insured population results were 3 times higher than results seen for the NH Medicaid population.

While Statewide preventive care for the NH Medicaid diabetic population was found to be at or higher than national Medicaid benchmarks for the 4 diabetic preventive measures evaluated in this study, examining the geographic area variations across the NH Health Analysis Areas (HAAs) found that the northern NH HAAs of Lancaster, Colebrook and Berlin were commonly in the highest performing HAAs on 4 diabetic preventive care measures.

Geographic variation in NH Medicaid preventive care results was very wide for a number of measures. Measures with the largest range in geographic variability were: Appropriate use of medications for asthmatic patients (highest HAA Peterborough at 83 percent, lowest HAA Colebrook at 33 percent); Breast cancer screening (highest HAA Franklin at 67

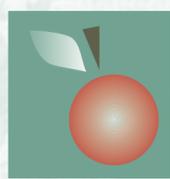
percent, lowest HAA North Conway at 36 percent), and Colorectal cancer screening (highest HAA Lebanon at 43 percent, lowest HAA Peterborough at 14 percent).

APPENDIX

Appendix 1: Adult Preventive Care Recommendations by Selected Organizations:

N.H. Prevention Guidelines

Effective April 1, 2008–March 31, 2010



Foundation for
Healthy Communities

Developed by New Hampshire Health Plan Medical Directors and the Department of Health & Human Services

ROUTINE PHYSICALS	RECOMMENDED SCHEDULE
AGES 0–30 MONTHS	Birth, 1, 2, 4, 6, 9, 12, 15, 18, 24, 30 months
AGES 3–21 YEARS	Annually
AGES 22–39 YEARS	Every 3–5 years
AGES 40–49 YEARS	Every 2 years
AGES 50+ YEARS	Annually

RECOMMENDED DIAGNOSTIC SCREENINGS	RECOMMENDED SCHEDULE
Breast Cancer	Beginning at age 40, screening mammography every 1–2 years; beginning at developmentally appropriate age, discuss the risks and benefits of clinical and self breast exam ^{3,6}
Cervical Cancer	Pap smear within 3 years of onset of sexual activity or age 21 (whichever comes first) and at least every 3 years ⁶
Colorectal Cancer	Beginning at age 50, screening options include one and/or a combination of the following: annual home fecal occult blood testing (FOBT), sigmoidoscopy every 5 years, double contrast barium enema every 5 years, colonoscopy every 10 years ^{3,6}
Prostate Cancer	Beginning at age 50, discuss the risks and benefits of Digital Rectal Exam (DRE) and Prostate Specific Antigen (PSA) ³
Chlamydia	Annually for sexually active women under the age of 24 ⁶
Osteoporosis	Beginning at age 65, routine screening for women; beginning at age 60, routine screening for women at risk for osteoporotic fractures ⁶
Obesity	Screening to include BMI for adults and BMI percentile-for-age for ages 2–20 years; offer intensive counseling and behavioral interventions to promote sustained weight loss ^{1,2}
Cholesterol (lipids)	Routinely screen men aged 35 years and older and women aged 45 years and older ⁶
Lead	Blood test at 1 and 2 years of age or between the ages of 3 and 5 if not previously tested, based on community or individual risk ⁵
Vision	Screen in children younger than age 5 years to detect amblyopia and strabismus, and defects in visual activity ⁶
Oral Health	Beginning at age 6 mos., prescribe oral fluoride supplementation at currently recommended doses after screening water source ^{**} ; at age 1 year, referral to dentist ^{2,6}
Depression	Screening as part of preventive care ⁶
Tobacco, Alcohol, and Injury Prevention Screening and Counseling	Part of all routine preventive care ⁶

Screening frequency may vary with patient characteristics, such as family history and other risk factors.

*Per N.H. Childhood Lead Screening Guidelines, 2004.

**MMWR 2001.

SOURCES:

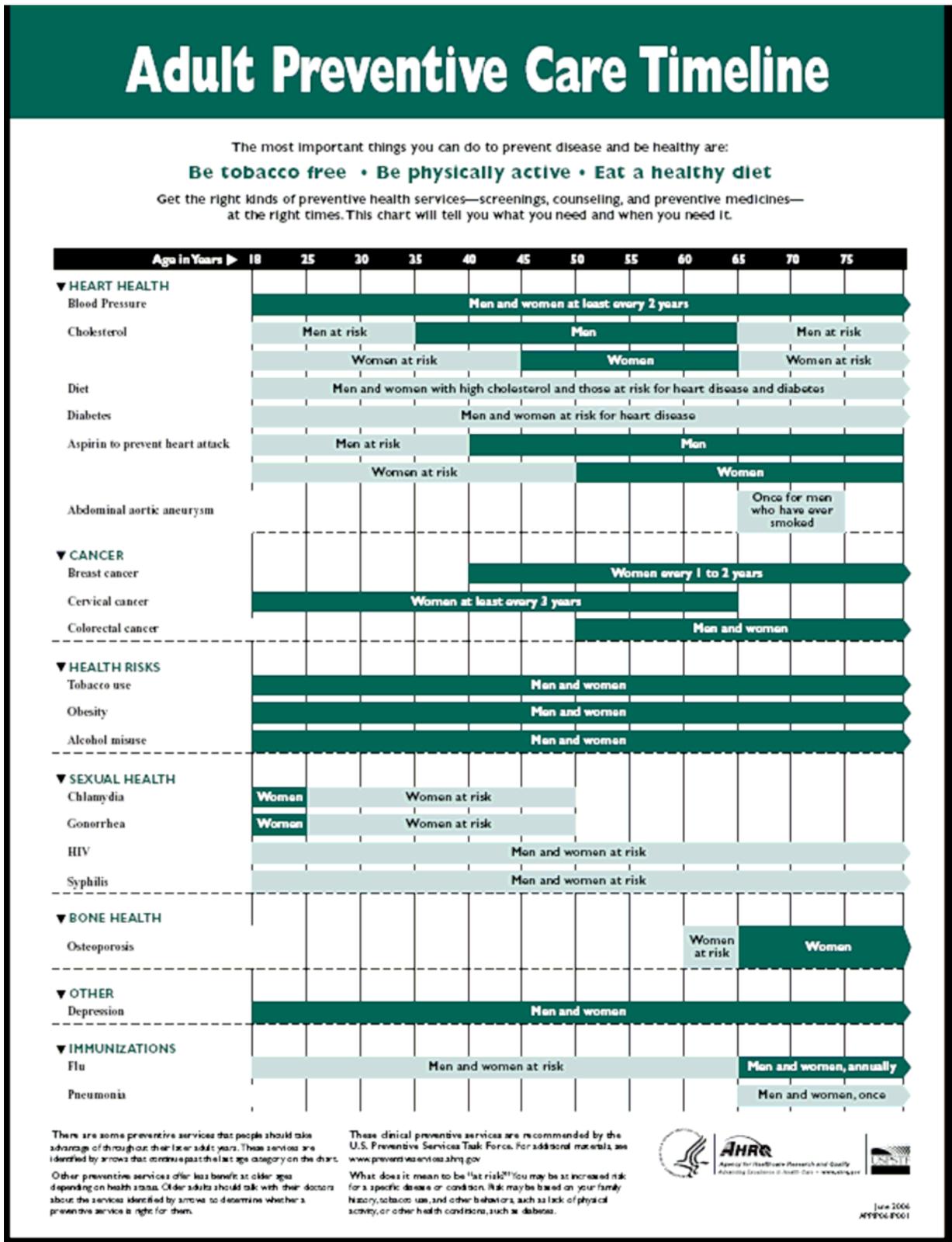
1. American Academy of Family Physicians (AAFP)
2. American Academy of Pediatrics (AAP)
3. American Cancer Society (ACS)

4. Advisory Committee on Immunization Practices (ACIP)

5. Center for Disease Control and Prevention (CDC)

6. United States Preventive Services Task Force (USPSTF)

2) Adult Preventive Care Timeline, by Agency for Healthcare Research and Quality, 2006.



3) Adult Preventive Care Recommendations Desk Guide, by Massachusetts Health Quality Partners, 2007/2008.



2007/8 Adult Preventive Care Recommendations

Health Maintenance Visit	18–29 Years	30–39 Years	40–49 Years	50–64 Years	65 + Years
Includes initial/interval history, age-appropriate physical exam; preventive screenings and counseling; assessment and administration of needed immunizations.	Annually for ages 18-21. Every 1-3 years depending on risk factors.	Every 1-3 years depending on risk factors.	Every 1-3 years depending on risk factors.	Annually	Annually
Cancer Screening					
Breast Cancer	Starting at age 20, clinical breast exam and self-exam instruction. Mammography for patients at high risk.		Clinical breast exam and self-exam instruction. Annual mammography at discretion of clinician/patient.	Clinical breast exam and self-exam instruction. Annual mammography.	Clinical breast exam and self-exam instruction. Annual mammography through age 69; ≥ age 70 at clinician/patient discretion.
Cervical Cancer (Pap Test and Pelvic Exam)	Initiate Pap test and pelvic exam at 3 years after first sexual intercourse or by age 21. Every 1-3 years depending on risk factors.				Every 1-3 years at clinician discretion.
Colorectal Cancer	Not routine except for patients at high risk.			Colonoscopy at age 50 and then every 10 years, or annual fecal occult blood test (FOBT) plus sigmoidoscopy every 5 years, or sigmoidoscopy every 5 years, or double-contrast barium enema every 5 years or annual FOBT. Screening after age 80 at clinician/patient discretion.	
Testicular and Prostate Cancer	Clinical testicular exam and self-exam instruction. Prostate cancer screening not routine.		Digital Rectal Exam (DRE) for patients at high risk for prostate cancer. PSA screening in high-risk patients at clinician/ patient discretion.	Digital Rectal Exam (DRE). Offer PSA screening at clinician/patient discretion.	
Skin Cancer	Periodic total skin exams every 3 years between the ages of 20 and 39 and annually age 40 and older. Frequency at clinician discretion based on risk factors.				
Other Recommended Screening					
Body Mass Index (BMI)	Screen for overweight and eating disorders. Consult the CDC's growth and BMI charts (www.cdc.gov/nccdphp/dnpa/bmi/index.htm). Ask about body image and dieting patterns.				
Hypertension	At every acute/nonacute medical encounter and at least once every 2 years.				
Cholesterol	Screen if not previously tested. Screen every 5 years with fasting lipoprotein profile (total cholesterol, LDL cholesterol, HDL cholesterol, and triglyceride).				
Diabetes (Type 2)	Screen every 3 years beginning at age 45. Screen more often and beginning at a younger age for those who are overweight and if risk factors are present.				
Infectious Disease Screening					
Sexually Transmitted Infections (Chlamydia, Gonorrhea, Syphilis & HPV)	For chlamydia and gonorrhea: Sexually active patients under age 25: Screen annually. Patients age 25 and over: Screen annually, if at risk. For syphilis: Screen if at risk. For HPV: If age 26 and under and not previously vaccinated, counsel patients regarding the schedule for HPV vaccine.				
HIV	Routine/annual testing of all patients at increased risk. Starting at age 13, CDC recommends universal screening.				
Hepatitis C	Periodic testing of all patients at high risk.				
Tuberculosis (TB)	Tuberculin skin testing of all patients at high risk.				
Sensory Screening					
Eye Exam for Glaucoma	At least once for patients with no risk factors. Every 3-5 years in high-risk patients.		Every 2-4 years.	Every 2-4 years.	Every 1-2 years.
Hearing and Vision Assessment				Ask about hearing and vision impairment, and counsel about the availability of treatment when appropriate.	
General Counseling					
All patients should be periodically screened and counseled as appropriate regarding: depression/suicide, alcohol/substance abuse, tobacco, diet/nutrition, obesity and eating disorders, preconception counseling, physical activity, infectious diseases/STIs, safety/injury and violence prevention, family violence/abuse, skin cancer, menopause management, osteoporosis, and dementia/cognitive impairment.					

2007/8 Adult Preventive Care Recommendations

2007 Immunization Schedule	18–29 Years	30–39 Years	40–49 Years	50–64 Years	65 + Years
Tetanus, Diphtheria, Pertussis (Td/Tdap)	For adults < 65 years of age not previously vaccinated with Td: 1 dose of Tdap, followed by 2 doses of Td. Td booster every 10 years. For adults < 65 years of age who have not previously received a dose of Tdap, Tdap should replace a single dose of Td.				For adults ≥ 65 years of age: 3 doses of Td if not previously immunized. Td booster every 10 years
Human papillomavirus (HPV)	3 doses for unvaccinated female adults aged ≤ 26 years.				
Measles, Mumps, and Rubella (MMR)	≥ 1 dose if born ≥ 1957 and no documentation of vaccination and no laboratory evidence of immunity to measles, mumps and rubella; 2) 2 doses, second dose ≥ 4 weeks after first dose, if 1) in a measles or mumps outbreak; 2) previously vaccinated with killed measles vaccine; 3) vaccinated with unknown type of vaccine 1963–1967; 4) student in post-secondary institutions; 5) worker in a health care setting; or 6) plan to travel internationally.			All health care workers born < 1957: 1 dose	
Varicella (Chicken Pox)	2 doses administered 4-8 weeks apart, if not previously immunized and no history of chicken pox or shingles, or if at high risk.				
Influenza	1 dose annually if at risk or if desired by patient.			1 dose annually for all adults aged ≥ 50 years.	
Pneumococcal (Polysaccharide)	1 dose if at risk and not previously immunized. Revaccinate once after 5 years for persons with chronic renal or nephrotic syndrome; asplenia; sickle cell disease; or immunosuppressive disorders.				1 dose after 65 years of age, even if vaccinated before 65 years of age.
Hepatitis B	3 doses if at risk and not previously immunized.				
Hepatitis A	2 doses if at risk and not previously immunized.				
Meningococcal Conjugate Vaccine (MCV4)	1 dose for: 1) college freshmen living in dormitories; 2) laboratory workers routinely exposed to Neisseria meningitidis; 3) adults with asplenia or terminal complement component deficiency; 4) military recruits; 5) travelers to sub-Saharan Africa (Dec –Jun), or to Mecca during annual Hajj. Consider for persons with HIV. Revaccination 3-5 years after first dose may be indicated for adults previously vaccinated with MPSV4 who remain at risk. Currently, only a single dose of MCV4 is recommended. The need for boosters after a dose of MCV4 has not been determined.				
Meningococcal Polysaccharide (MPSV4)	Adults ≤ 55 years of age: MCV4 preferred, MPSV4 acceptable.			Adults > 55 years of age: MPSV4 is the only licensed product for this age group.	
Zoster	1 dose for all adults aged ≥ 60 years, regardless of history of herpes zoster.				

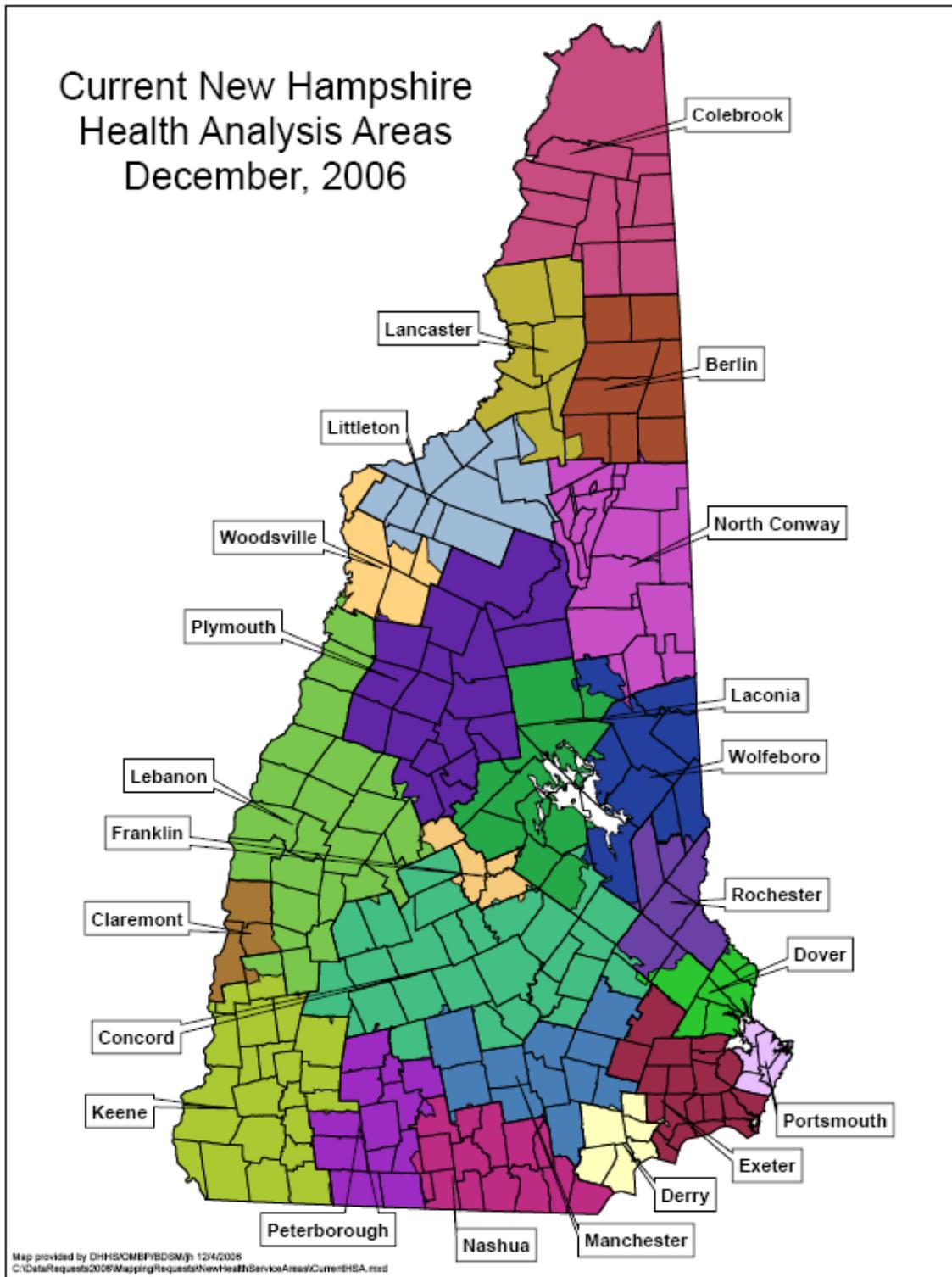
Jan. 2008 This summary represents a compilation of evidence-based recommendations from national agencies, reviewed by a collaborative working group of clinicians and endorsed by leading health care organizations in Massachusetts. These guidelines are intended as quality practice recommendations. They are not intended as a description of benefits, conditions of payment, or any other legal requirements of any particular health plan or payor. Each health plan or payor makes its own determination of coverage and benefits. In the event that these practice recommendations are inconsistent with any applicable laws or regulations, such laws or regulations take precedence. We acknowledge the efforts of the Publications Unit in the Office of MassHealth Operations for design and editorial assistance.

4) Adult Preventive Care Timeline, by Gundersen Lutheran Health Plan, 2007/2008.

		Applies to:												
		Females					Males					Males & Females		
Age	18-19	20	21-25	26-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
Periodic Health Examination	Every 3-5 years													
Blood Pressure	Every 2 years													
Fasting Total Lipid Profile	Every 5 years													
Fasting Blood Sugar	Every 3 years													
Mammography	Yearly													
Pap Smear/Cervical Cytology	Yearly													
Chlamydia Screen	Yearly													
Colonoscopy OR	Every 3 years after 3 yearly negative results													
Fecal Occult Blood and Sigmoidoscopy/Barium Enema	Stool specimen yearly and Sigmoidoscopy/Barium enema every 5 years													
Prostate Specific Antigen/Digital Rectal Exam	Yearly													
Hearing Exam	Once													
Eye Exam	Twice													
Bone Mineral Density	Once													
Tetanus/Diphtheria Pertussis	Tdap once, then Td every 10 years													
Influenza	Yearly													
Pneumococcal	Once													
Human Papilloma Virus	3 doses													
Meningococcal	Once													

Remember these are designed to serve as a guide. You and your healthcare provider should work together to determine what care is best for you and your overall health. For more information about the Gundersen Lutheran Health Plan Preventive Care Guidelines, call the Health Plan Quality Management Department at (608) 775-8022.

Appendix 2: Map of New Hampshire Health Analysis Areas (HAA).



**New Hampshire
Health Service Area**

Health Service Area	Zip Code	Zip Name
Berlin	00169	Sucess
Berlin	03570	Berlin
Berlin	03581	Gorham
Berlin	03588	Milan
Berlin	03593	Randolph
Claremont	03603	Charlestown
Claremont	03743	Claremont
Colebrook	00170	Second College Grant
Colebrook	00186	Erving's Location
Colebrook	00187	Dix Grant
Colebrook	03576	Colebrook
Colebrook	03579	Errol
Colebrook	03592	Pittsburg
Colebrook	03597	West Stewartstown
Concord	03046	Dunbarton
Concord	03216	Andover
Concord	03218	Barnstead
Concord	03221	Bradford
Concord	03224	Canterbury
Concord	03225	Center Barnstead
Concord	03229	Contoocook
Concord	03234	Epsom
Concord	03242	Henniker
Concord	03244	Hillsboro
Concord	03252	Lochmere
Concord	03255	Newbury
Concord	03258	Chichester
Concord	03261	Northwood
Concord	03263	Pittsfield
Concord	03268	Salisbury
Concord	03272	South Newbury
Concord	03275	Suncook
Concord	03278	Warner
Concord	03280	Washington
Concord	03301	Concord
Concord	03302	Concord
Concord	03303	Concord
Concord	03304	Bow
Concord	03305	Concord
Concord	03307	Loudon
Concord	03837	Gilmanton Iron Works
Derry	03038	Derry
Derry	03041	East Derry
Derry	03073	North Salem
Derry	03079	Salem
Derry	03087	Windham
Derry	03811	Atkinson
Derry	03826	East Hampstead
Derry	03841	Hampstead
Derry	03873	Sandown
Dover	03805	Rollinsford
Dover	03820	Dover
Dover	03821	Dover
Dover	03822	Dover
Dover	03823	Madbury
Dover	03824	Durham
Dover	03825	Barrington
Dover	03869	Rollinsford
Dover	03878	Somersworth
Exeter	03042	Epping
Exeter	03044	Fremont
Exeter	03077	Raymond
Exeter	03290	Nottingham
Exeter	03291	West Nottingham
Exeter	03819	Danville
Exeter	03827	East Kingston
Exeter	03833	Exeter
Exeter	03842	Hampton
Exeter	03844	Hampton Falls
Exeter	03848	Kingston
Exeter	03856	Newfields
Exeter	03857	Newmarket
Exeter	03858	Newton
Exeter	03859	Newton Junction
Exeter	03865	Plaistow
Exeter	03874	Seabrook

**New Hampshire
Health Service Area**

Health Service Area	Zip Code	Zip Name
Exeter	03885	Stratham
Franklin	03235	Franklin
Franklin	03243	Hill
Franklin	03276	Tilton
Franklin	03298	Tilton
Franklin	03299	Tilton
Keene	03431	Keene
Keene	03435	Keene
Keene	03441	Ashuelot
Keene	03443	Chesterfield
Keene	03445	Sullivan
Keene	03446	Swanzy
Keene	03447	Fitzwilliam
Keene	03448	Gilsum
Keene	03450	Harrisville
Keene	03451	Hinsdale
Keene	03455	Marlborough
Keene	03456	Marlow
Keene	03457	Nelson
Keene	03462	Spofford
Keene	03464	Stoddard
Keene	03465	Troy
Keene	03466	West Chesterfield
Keene	03467	Westmoreland
Keene	03469	West Swanzy
Keene	03470	Winchester
Keene	03602	Alstead
Keene	03604	Drewsville
Keene	03607	South Acworth
Keene	03608	Walpole
Keene	03609	North Walpole
Laconia	03220	Belmont
Laconia	03226	Center Harbor
Laconia	03227	Center Sandwich
Laconia	03237	Gilmanton
Laconia	03246	Laconia
Laconia	03247	Laconia
Laconia	03249	Gilford
Laconia	03253	Meredith
Laconia	03254	Moultonborough
Laconia	03256	New Hampton
Laconia	03259	North Sandwich
Laconia	03269	Sanbornton
Laconia	03289	Winnisquam
Laconia	03883	South Tamworth
Lancaster	00185	Kilkenny
Lancaster	03582	Groveton
Lancaster	03583	Jefferson
Lancaster	03584	Lancaster
Lancaster	03587	Meadows
Lancaster	03590	North Stratford
Lebanon	03230	Danbury
Lebanon	03231	East Andover
Lebanon	03233	Elkins
Lebanon	03240	Grafton
Lebanon	03257	New London
Lebanon	03260	North Sutton
Lebanon	03273	South Sutton
Lebanon	03284	Springfield
Lebanon	03287	Wilmot
Lebanon	03601	Acworth
Lebanon	03605	Lempster
Lebanon	03741	Canaan
Lebanon	03745	Cornish
Lebanon	03746	Cornish Flat
Lebanon	03748	Enfield
Lebanon	03749	Enfield Center
Lebanon	03750	Etna
Lebanon	03751	Georges Mills
Lebanon	03752	Goshen
Lebanon	03753	Grantham
Lebanon	03754	Guild
Lebanon	03755	Hanover
Lebanon	03756	Lebanon
Lebanon	03765	Haverhill
Lebanon	03766	Lebanon
Lebanon	03768	Lyme
Lebanon	03769	Lyme Center

New Hampshire

Health Service Area	Zip Code	Zip Name
Lebanon	03770	Meriden
Lebanon	03773	Newport
Lebanon	03777	Orford
Lebanon	03779	Piermont
Lebanon	03781	Plainfield
Lebanon	03782	Sunapee
Lebanon	03784	West Lebanon
Littleton	03561	Littleton
Littleton	03574	Bethlehem
Littleton	03580	Franconia
Littleton	03585	Lisbon
Littleton	03586	Sugar Hill
Littleton	03595	Twin Mountain
Littleton	03598	Whitefield
Manchester	03032	Auburn
Manchester	03034	Candia
Manchester	03036	Chester
Manchester	03037	Deerfield
Manchester	03040	East Candia
Manchester	03045	Goffstown
Manchester	03053	Londonderry
Manchester	03070	New Boston
Manchester	03101	Manchester
Manchester	03102	Manchester
Manchester	03103	Manchester
Manchester	03104	Manchester
Manchester	03105	Manchester
Manchester	03106	Hooksett
Manchester	03107	Manchester
Manchester	03108	Manchester
Manchester	03109	Manchester
Manchester	03110	Bedford
Manchester	03111	Manchester
Manchester	03281	Weare
Nashua	03031	Amherst
Nashua	03033	Brookline
Nashua	03048	Greenville
Nashua	03049	Hollis
Nashua	03051	Hudson
Nashua	03052	Litchfield
Nashua	03054	Merrimack
Nashua	03055	Milford
Nashua	03057	Mont Vernon
Nashua	03060	Nashua
Nashua	03061	Nashua
Nashua	03062	Nashua
Nashua	03063	Nashua
Nashua	03064	Nashua
Nashua	03076	Pelham
Nashua	03082	Lyndeborough
Nashua	03086	Wilton
North Conway	00168	Beans Purchase
North Conway	00172	Hadleys Purchase
North Conway	00173	Cutts Grant
North Conway	00174	Beans Grant
North Conway	00176	Sargents Purchase
North Conway	00177	Pinkham Grant
North Conway	00179	Chandlers Purchase
North Conway	00180	Thompson/Meserves Purch
North Conway	00181	Low and Burbanks Grant
North Conway	00182	Crawfords Purchase
North Conway	00183	Greens Grant
North Conway	00184	Martins Location
North Conway	03575	Bretton Woods
North Conway	03589	Mount Washington
North Conway	03812	Bartlett
North Conway	03813	Center Conway
North Conway	03817	Chocorua
North Conway	03818	Conway
North Conway	03832	Eaton Center
North Conway	03838	Glen
North Conway	03845	Intervale
North Conway	03846	Jackson
North Conway	03847	Kearsarge
North Conway	03849	Madison
North Conway	03860	North Conway
North Conway	03875	Silver Lake
North Conway	03890	West Ossipee

New Hampshire

Health Service Area	Zip Code	Zip Name
Peterborough	03043	Francestown
Peterborough	03047	Greenfield
Peterborough	03071	New Ipswich
Peterborough	03084	Temple
Peterborough	03440	Antrim
Peterborough	03442	Bennington
Peterborough	03444	Dublin
Peterborough	03449	Hancock
Peterborough	03452	Jaffrey
Peterborough	03458	Peterborough
Peterborough	03461	Rindge
Peterborough	03468	West Peterborough
Plymouth	03215	Waterville Valley
Plymouth	03217	Ashland
Plymouth	03222	Bristol
Plymouth	03223	Campton
Plymouth	03232	East Hebron
Plymouth	03241	Hebron
Plymouth	03245	Holderness
Plymouth	03251	Lincoln
Plymouth	03262	North Woodstock
Plymouth	03264	Plymouth
Plymouth	03266	Rumney
Plymouth	03274	Stinson Lake
Plymouth	03279	Warren
Plymouth	03282	Wentworth
Plymouth	03293	Woodstock
Portsmouth	03801	Portsmouth
Portsmouth	03802	Portsmouth
Portsmouth	03803	Portsmouth
Portsmouth	03804	Portsmouth
Portsmouth	03840	Greenland
Portsmouth	03843	Hampton
Portsmouth	03854	New Castle
Portsmouth	03862	North Hampton
Portsmouth	03870	Rye
Portsmouth	03871	Rye Beach
Rochester	03815	Center Strafford
Rochester	03835	Farmington
Rochester	03839	Rochester
Rochester	03851	Milton
Rochester	03852	Milton Mills
Rochester	03855	New Durham
Rochester	03866	Rochester
Rochester	03867	Rochester
Rochester	03868	Rochester
Rochester	03884	Strafford
Rochester	03887	Union
Wolfeboro	03809	Alton
Wolfeboro	03810	Alton Bay
Wolfeboro	03814	Center Ossipee
Wolfeboro	03816	Center Tuftonboro
Wolfeboro	03830	East Wakefield
Wolfeboro	03836	Freedom
Wolfeboro	03850	Melvin Village
Wolfeboro	03853	Mirror Lake
Wolfeboro	03864	Ossipee
Wolfeboro	03872	Sanbornville
Wolfeboro	03882	Effingham
Wolfeboro	03886	Tamworth
Wolfeboro	03894	Wolfeboro
Wolfeboro	03896	Wolfeboro Falls
Wolfeboro	03897	Wonalancet
Woodsville	03238	Glenclyff
Woodsville	03740	Bath
Woodsville	03771	Monroe
Woodsville	03774	North Haverhill
Woodsville	03780	Pike
Woodsville	03785	Woodsville