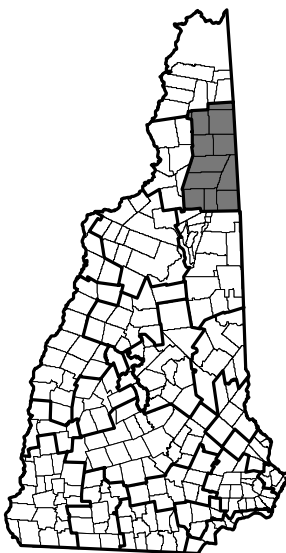


Berlin Healthcare Service Area



This narrative is part of a larger effort, the *New Hampshire Regional Health Profiles*, and grew out of a mandate established by the Legislature in its passage of SB 183 in 1999. That bill amended RSA 126A to include a requirement for the Department of Health and Human Services to continually assess the health status of the State's residents and to make its findings available in a report issued every two years.

This narrative was jointly developed by the Dartmouth Hitchcock Alliance and the Department and is the first to be issued under this legislation. The *Regional Profiles* provide a means for residents, community leaders, planners and providers to gain a better understanding of the health status of the State's residents and communities.

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Overview of the HSA

The Berlin Healthcare Service Area (HSA) is comprised of seven communities. Together these towns cover 361 square miles and had an estimated total population of 17,804 in 1998, resulting in a population density of 49 people per square mile. This HSA has more elderly and fewer children and adults between 18 and 44 years of age than does the State overall, as depicted on the Demographic Profile below.

Town Name	1998 Pop Est	% of HSA Pop	% of HSA Self Pay Admissions	Ratio of Self-Pay Admissions to Pop Pct	1996 Per Capita Income	Pop Density (persons per sq. mi).	Miles to Nearest Hospital*
Berlin City	11,924	67%	73%	1.1	\$13,378	194	--
Dummer	327	2%	0%	0.0	\$15,038	7	12
Errol	303	2%	6%	3.3	\$12,536	5	21
Gorham	3,093	17%	15%	0.9	\$15,060	97	5
Milan	1,338	8%	6%	0.7	\$15,256	21	9
Randolph	380	2%	0%	0.0	\$21,835	8	14
Shelburne	439	2%	0%	0.0	\$17,190	9	14
HSA Total	17,804				\$14,102	49	
New Hampshire	1,185,000				\$18,697	132	

* = Nearest Hospital may be in a different HSA

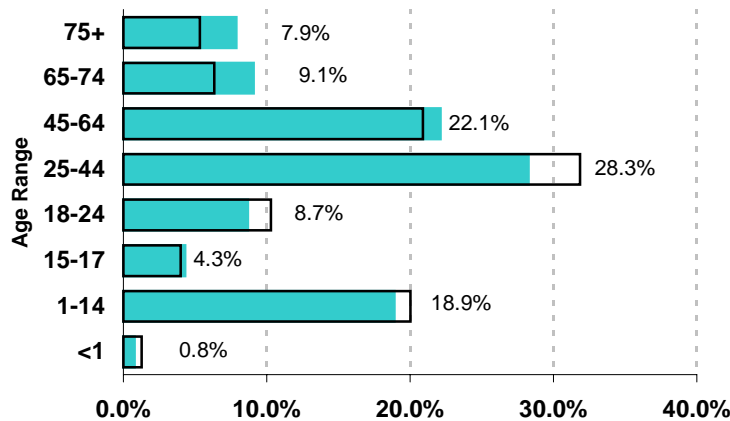
- 1998 Population Estimate = New Hampshire Office of State Planning
- Percent of HSA Self Pay Admissions = Each community's share of individual overnight hospital admissions for the full HSA that are recorded as "Self Pay" on the Uniform Hospital Discharge Data Set for 1998
- Ratio of Self-Pay Admissions to Population Percentage = Percent of HSA self-pay admissions divided by the percent of HSA population. A higher ratio reflects a greater proportion of individuals within a community who must cover the costs of hospitalization from their personal resources, i.e., they do not have health insurance coverage for the hospitalization.
- 1996 Per Capita Income = Office of State Planning, from the Department of Revenue Administration
- Population Density = Total square miles from the Office of State Planning, divided by the 1998 Population Estimate
- Miles to Nearest Hospital = mileage from a community to the nearest hospital that may not be the hospital(s) in the HSA, as given in the *1999 New Hampshire Community Profiles*, published by the State Occupational Information Coordinating Committee (SOICC) of New Hampshire

Demographic Profile

Percentage of Population by Age

Shaded and Labeled bars = HSA population profile

Outlined bar = State population profile



Graphics are based on data provided in the Primary Care Data Set, 1993-1997, which stated “State, city, and town population counts for New Hampshire have been obtained by applying the proportions from the 1995 New Hampshire Population Projections for Counties by Age and Sex to the 1995 Population Estimates of New Hampshire Cities and Towns; both of which were prepared by the New Hampshire Office of State Planning (OSP). The population figures for 1995 were chosen for use in calculating rates since this year represents the midpoint of the five years of study, 1993 through 1997... Since the town-specific age and sex population estimates are based on town-wide estimates applied to county level projections, it is assumed that there is an unknown amount of error in the individual components of the estimates. However, when combining towns together to construct HSAs, much of the variability in the town-specific estimates is assumed to be canceled.” *Primary Care Access Data, 1993-1997*

Health Profile

The points offered below are provided as an overview of the health of the HSA in the three *Regional Profile* focus areas: *Current Health*, *Use of Health Care* and *Risks to Future Health*. These are provided as a representative sample of findings presented in the data tables and should not be construed as the most important findings. Readers are urged to review the data tables to better understand the conditions and circumstances of this HSA.

In some instances, the differences between the HSA and the State are described as significant. This refers to a difference being “statistically significant.”

- When the source of the data is the 1999 NH Health Insurance Coverage and Access Survey (NH HICAS), the difference is significant at the 95% confidence level, i.e., when the range between the upper and lower confidence intervals for the HSA is higher or lower than the range for the State confidence interval (the confidence ranges do not overlap).
- When the source of data is the Primary Care Access Data set (PCAD), a difference is also significant at the 95% confidence level, based on a “z test score,” a test for statistical significance, i.e., when this test statistic is “significant,” there is 95% confidence that the rates being compared are different for reasons other than “random chance.”
- Because a finding is statistically significant, i.e., not due to chance alone, the difference may not be of sufficient magnitude to be practical or meaningful to understanding the health issue or for developing strategies.
- A finding that a difference is not statistically significant may not mean that there is no value to paying attention to the difference, i.e., not being statistically significant does not mean that it is not important or necessary to consider the underlying health issues for indicators that are different between the HSA and the State, particularly on indicators that seem to show a trend or relationship, such as between indicators associated with births.

All rates in this narrative have been age-adjusted. The calculation of age-adjusted rates makes it possible to compare the rates between an HSA and the State. The proportion of the population in each age range varies from HSA to HSA and between an HSA and the State. Thus, it would be misleading to compare HSA rates to the State rate unless the rates were adjusted for this variation in the distribution of age ranges.

Please refer the *Technical Notes* section for an explanation of the age-adjustment calculation and the calculations for statistical significance and confidence intervals.

Unless noted in the text, the data date and source are given in [] at the end of each point. Key to abbreviations:

- NHES = New Hampshire Employment Security
- NH HICAS = *New Hampshire Health Insurance Coverage and Access Survey, 1999*; Office of Planning and Research, Department of Health and Human Services.
- PCAD = *Assessing New Hampshire’s Communities: Primary Care Access Data, 1993-1997*; Health Statistics and Data Management Bureau, Office of Community and Public Health.
- UHDDS = Uniform Hospital Discharge Data Set, maintained by the Health Statistics and Data Management Bureau, Office of Community and Public Health.
- US Census = Taken from 1990 Census of Population and Housing Summary Tape File 3A (STF3A), 1990 US Census data, US Department of Commerce

Observations on Current Health

- 92.4% of the population under age 65 in the HSA characterized their health as “good,” “very good,” or “excellent,” according to findings from the 1999 NH Health Insurance Coverage and Access Survey. This was slightly lower than the average State response (94.8%).
- Significantly fewer residents under age 65 of the HSA, compared to the State, characterized themselves as having a chronic condition lasting at least a year (4.3% versus 5.9%). [1999; NH HICAS]
- 6% of the working age population (16-64) in the HSA was out of the workforce due to a disability, according to the 1990 US Census, double the State level of 2.9%.
- 2.8 “premature” deaths per thousand population between the ages of 18 and 64 in the HSA, were comparable to the State rate of 2.6 per 1,000 population. [1993-1997; PCAD]
- The rate of low weight births per 1000 live births was slightly higher in the HSA than in the State as a whole: 56/1000 versus 52/1000. [1993-1997; PCAD]

Observations on Use of Health Care

- According to the 1999 New Hampshire Health Insurance Coverage and Access Survey, 19.9% of the population under 65 in the HSA were not “extremely” or “very” confident in their access to health care. This was comparable to the finding of 19% statewide.
- 6.7% of the population under 65 in the HSA, based on findings from the 1999 Health Insurance Coverage and Access Survey, did not have a usual source of health care. This percent was comparable to the statewide level of 6.9%.
- 12.8% of the population under age 65 in the HSA did not see a doctor in the year prior to the 1999 Health Insurance Coverage and Access Survey, a finding slightly higher than the statewide average, 11.7%
- 22.1% of the population under age 65 in the HSA had not seen a dentist in the year prior to the 1999 Health Insurance Coverage and Access Survey. This finding was slightly higher than the statewide average of 21.9%.

Ambulatory Care Sensitive Conditions = medical conditions that may not require inpatient hospitalization (a stay of at least one night) if timely and appropriate primary care is received.

- Hospital admissions for acute ambulatory care sensitive conditions, such as pneumonia and other infections, were significantly higher in this HSA compared to the State: 9.9 per 1000 population, versus 7.4 per 1000. [1993-1998; UHDDS]
- Hospital admissions for chronic ambulatory care sensitive conditions, such as diabetes and asthma, were significantly higher for this HSA compared to the State: 9.2 per 1000 population, versus 4.6 per 1000. [1993-1998; UHDDS]

- Higher rates of ambulatory care sensitive admissions (per 1000 population) were observed for three major age categories. [1993-1997; PCAD]

	HSA	State	Ratio (HSA/State)
Pediatric	6.6	4.3	1.5
Adult*	12.3	6.1	2.0
Elder*	83.1	57.4	1.4

(Pediatric = up to age 18; Adult = 18-64; Elder = 65+)

* = Significantly higher

- Residents of each age category in this HSA experienced higher rates of hospitalization (per 1000 population) due to injuries. [1993-1997; PCAD]

	HSA	State	Ratio (HSA/State)
Pediatric	4.4	3.1	1.4
Adult*	10.3	6.2	1.7
Elder*	43.7	26.2	1.7

(Pediatric = up to age 18; Adult = 18-64; Elder = 65+)

* = Significantly higher

- Regarding the source of payment for inpatient hospital services (i.e., a stay of at least one night), for residents of this HSA, Medicare, at 51.9%, was the dominant payor, followed by commercial insurance (13.5%), HMO (10.6%), other (10.6%), Medicaid (9.7%), and self-pay (3.8%). [1998; UHDDS]

Observations on Risks to Future Health

- At 4.2%, unemployment in this HSA in 1999 was higher than the State average of 2.7%. [NHES]
- 13.5% of children (under age 19) in the HSA received Medicaid and/or Food Stamps, compared to the State average of 9.1%. 3.7% of adults (19 and older) received Medicaid and/or Food Stamps, compared to the State average of 2.1%. Both of these HSA rates were significantly higher than the State rates. [1997-1998; PCAD]
- 25.5% of families in the HSA had incomes twice as high as the federal poverty level, compared to 21.4% for the State. [1999; NH HICAS]
- 93.4% of adults in the HSA completed High School. This was comparable to the State average of 92.2%. [1999; NH HICAS]
- Selected birth characteristics for the HSA:
 - ✓ The birth rate for women ages 15 to 44 in this HSA was significantly lower, at 207.2 per 1000 women, compared to the State rate of 279.1 per 1000 women. [1993-1997; PCAD]
 - ✓ The rate of new mothers in the HSA who acknowledged smoking during their pregnancy was 243 per 1000 live births. This rate was significantly higher than the State rate of 176 per 1000 births. [1993-1997; PCAD]

- ✓ The rate of births to unmarried women was 298 per 1000 live births in this HSA. This rate was significantly higher than the State rate of 223 per 1000 live births. [1993-1997; PCAD]
- ✓ The rate of births to women in this HSA who had not completed High School was 149 per 1000 live births. This rate was significantly higher than the State rate of 109 per 1000 live births. [1993-1997; PCAD]
- ✓ Medicaid covered the cost of births in this HSA at the rate of 338 per 1000 live births. This rate was significantly higher than the State rate of 207 per 1000 live births. [1993-1997; PCAD]
- 13.1% percent of people under 65 in the HSA did not have health insurance during some part of the 12 months prior to the 1999 Health Insurance Coverage and Access Survey. This was slightly more than the State average of 11.4%.
- 10.1% of the population under age 65 in the HSA were uninsured. This was comparable to the State average of 9.3%, according to the 1999 NH Health Insurance Coverage and Access Survey.
- 26.9% of residents in the HSA under age 65 did not have dental insurance at the time of the 1999 NH Health Insurance Coverage and Access Survey, a slightly higher proportion than the State average of 25.7%.

Additional Observations

By reviewing census data, it is possible to learn much about the people living in a community. Unfortunately, the most recent census available is from the 1990 US Census. It will be helpful to compare data from the 2000 census (which is underway) to that from 1990 to see how this HSA has changed in terms of:

- Households with children headed by single parents - In 1990, almost one in 5 households (19.8%) in the HSA was headed by a single parent (female headed: 17%; male headed: 2.9%). The State average was 17% of households headed by a single parent (13.1% were female headed and 3.9% were male headed). [1990; US Census]
- Income distribution – In 1990, 27.1% of the families in the HSA had incomes below \$20,000 and 19.7% of the households in the HSA had incomes greater than \$50,000. The State average was 15.2% of families with incomes below \$20,000 and 37.0% of families with incomes greater than \$50,000. [1990; US Census]
- People isolated by virtue of:
 - ✓ Living alone – In this HSA 26.8% of households were classified as “single person” compared to the State average of 21.9%. [1990; US Census]
 - ✓ Not speaking English – In this HSA 6.4% of households were linguistically isolated compared to the State average of 1.5%. [1990; US Census]
 - ✓ Not owning a vehicle – In this HSA 31.5% of the population did not have personal transportation available compared to a State average of 16.1%. [1990; US Census]

- Population stability, as reflected in:
 - ✓ Not relocated over the last 5 years – In this HSA 61.6% of the households lived in the same location at least 5 years compared to the State average of 47.8%. [1990; US Census]
 - ✓ Owned a home rather than rented – In this HSA 73.3% of the population lived in owner-occupied housing compared to the State average of 73.6%. [1990; US Census]