The Dartmouth Atlas of Health Care

The New England States

The Center for the
Evaluative Clinical Sciences

Dartmouth Medical School

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The Dartmouth Atlas of Health Care in the New England States

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Introduction

Geographic Variations In Health Care

The national volume of the Dartmouth Atlas of Health Care, published in the Spring of 1996, brought to light the often startling patterns of variation in health care throughout the nation. Research conducted to produce the Atlas revealed large differences in the rates of allocation of hospital resources, in the physician supply, and in the use of procedures such as coronary artery bypass grafting. The analysis of these differences was at the level of 306 hospital referral regions — the natural markets, defined by patient origin studies, for the use of tertiary, or referral, care among populations in the United States.

But health care is highly local, and the analysis of patterns of resource distribution and utilization among referral regions often masks important differences between the communities which, when aggregated, make up the larger region. Moreover, the task of actually addressing the problems of variation is often a local undertaking, one for which more specific — and more local — information is needed.

The 306 hospital referral regions comprise 3,436 geographically distinct hospital service areas, which are the natural markets for care that can be delivered locally — outpatient services and most acute hospital care. The regional volumes of the Dartmouth Atlas of Health Care (this book is one of nine such volumes) focus on these hospital service areas as the unit of analysis. The regional volumes make clear that there is often as much, and frequently more, variation among the hospital service areas within states and regions than among the larger units of analysis, the hospital referral regions.

The existence of variation raises a number of important issues. Foremost is the question “Which rate is right?” Which pattern of resource allocation, and which pattern of utilization, is “correct?” The study of practice variations reveals how complex this question really is. In the case of variations in rates of individual procedures, such as coronary artery bypass grafting and back surgery, the explanation is not that patients in areas with low procedure rates are going without treatment; they are, instead,

being treated differently, often with more conservative medical management (Table 1). Learning which rate is right requires learning what informed patients want. The right rate must be the one that reflects the choices of patients who have been adequately informed and empowered to choose among the available options.

Table 1. Common Conditions for Which a Number of Treatment Alternatives Are Used

Condition	Major Treatment Alternatives
Noncancerous condition of the uterus	Surgery (by type;) hormone treatment; drugs; watchful waiting
Angina pectoris	Bypass surgery; angioplasty; drugs
Gallstones	Surgery; stone crushing; medical management; watchful waiting
Peripheral vascular disease	Bypass surgery; angioplasty; medical management
Cataracts	Lens extraction (by type); watchful waiting
Arthritis of hip and knee	Surgery (by type); medical management
Prostatism (BPH — benign prostatic hyperplasia)	Surgery (by type); balloon dilation; drugs; microwave diathermy; watchful waiting
Herniated disc	Surgery (by type); various medical management strategies
Atherosclerosis of carotid artery with threat of stroke	Carotid endarterectomy; aspirin

In the case of variations in the supply of health care resources, such as the numbers of hospital beds and physicians, the question "Which rate is right?" needs to be framed in another way: What is the impact on population health of variations in resource allocation? Is more better? And if not, how much could be reallocated to other, more effective uses by reducing resources and their utilization to the level of more conservative communities?

Another important issue raised by geographic variation concerns fairness. Variation studies provide good evidence that populations living in areas where health care spending is low are not necessarily sicker, or have greater unmet needs, than those who live in areas where per capita spending on health care is high. Costs are higher in these regions, not because better health is being achieved, but because the local health care systems have greater capacity, or because the price of medical care in those communities is higher. A system that rewards high cost areas by continuing to pay their higher costs is by definition economically punishing areas that have fewer resources, use them more efficiently, and are reimbursed less. Is it fair for citizens living in regions with low per capita health care costs to subsidize the greater (and more costly) use of care by people living in high resource and high utilization regions?

The nine regional Atlases provide the data and analysis for specific hospital service areas with which these and other questions can be addressed. Strategies to address the question of the appropriate levels of supply must be developed in the absence of detailed understanding of the nature of health care needs, medical care outcomes, and what patients want. One such strategy begins by examining individual communities and comparing them to others. Such comparisons lead naturally to a search for "efficiently" operated health plans or communities — those with an adequate but not excessive supply of resources.

About Benchmarking in the Atlas

Even in the absence of a detailed understanding of the nature of health care needs, medical care outcomes, and what patients want, we must establish appropriate levels of supply. One method of doing this is to examine the way resources are actually used, and to use as "benchmarks" efficiently operated health care plans or communities that appear to have an adequate but not excessive level of supply.

Benchmarking provides answers to two related questions: How much more (or less) health care capacity would the nation need, if all areas had the level of capacity of the benchmark area? And how much more (or less) health care capacity would be required in a specific area if its per capita capacity were equal to the level of the benchmark area?

Figure 1.1 illustrates the benchmarking approach to the second question by comparing the supply of acute care hospital beds per thousand residents of Boston, Massachusetts, Hartford, Connecticut, and New Haven, Connecticut, to three benchmarks. The benchmarks in this example are the highest ranked of the three areas, Boston (which had 3.7 beds per thousand residents in 1993); New Haven, the lowest ranked (2.4 beds per thousand) and the United States average of 3.3 beds per thousand. The figure shows the result of applying the New Haven benchmark to Boston: Boston's adjusted bed supply was 54% higher than New Haven's (3.712/ 2.404= 1.54). If the New Haven rate were applied in Boston, Boston would have had 1,006 fewer beds (the number in parentheses). This number is obtained by multiplying the population of the Boston hospital service area by its bed rate: 3.712 x 768,694 = 2,853.4. Had New Haven rates applied, the number allocated would have been 1,847.9 (2.404 x 768,694). The "excess" beds in Boston are calculated by subtraction: 2,853.4 - 1,847.9 = 1,005.5.

In the figure, Hartford, Connecticut's, adjusted rates are demonstrated to have been 23% higher than the New Haven benchmark; the surplus is calculated as 288 acute care beds in the Hartford hospital service area. The figure also benchmarks Boston's

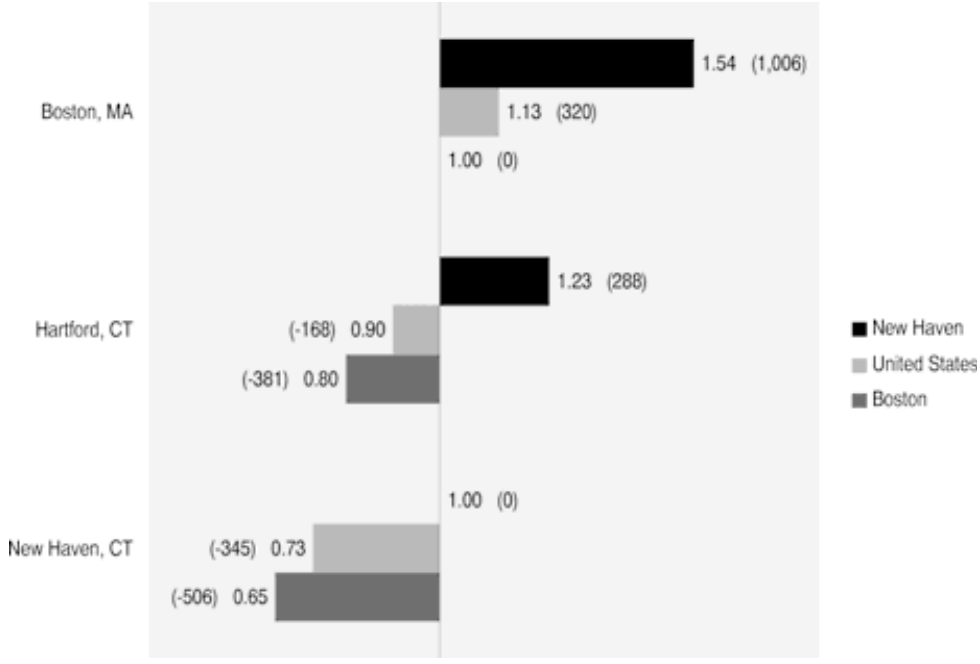


Figure 1.1. Allocated Acute Care Hospital Beds in Selected Hospital Service Areas in the New England States Compared to the Boston and New Haven Hospital Service Areas and to the U.S. Average (1993)
Benchmarks are used in this volume of the Atlas to compare levels of supply of health care resources, reimbursements, and utilization among hospital service areas in the New England States. These comparisons are starting points; using the Dartmouth Atlas of Health Care databases, which are available on CD-ROM, and software available without charge through the Atlas internet site (http://www.dartmouth.edu/~atlas/), it is possible to compare any given hospital service area to any other area, and, in the case of the physician workforce, to a large health maintenance organization.

level of bed supply to Hartford's and New Haven's. Hospital bed rates in Hartford were 20% lower than in Boston; when the Boston benchmark is applied to Hartford, 381 more beds are needed. If Boston's rate were applied to New Haven, 506 more hospital beds would be needed. The figure also illustrates the use of the United States average as a benchmark.

Tables

Detailed information about each hospital service area in the New England States, including most of the variables presented in the Atlas, are presented at the end of Parts Two through Four. Part Six presents details concerning the contribution of specific hospitals to the total allocation of hospital beds and Medicare reimbursements for inpatient care in each hospital service area. It also includes information on the number of physicians who serve each hospital service area and the locations of their practices. A more extensive database is available on CD-ROM.

Strategies and Methods

Part Nine of the national volume of the Dartmouth Atlas of Health Care provides details about the methods used in the Atlas and an explanation of the distribution graphs and the measure of association, the R^2 statistic, used in both the national and regional Atlases. Since some hospital service areas have small populations, areas were excluded from maps and figures in the regional volumes if the standard error of their rates exceeded 10% of the national average rate; for surgical procedures, the maximum standard error was 20%. The minimum population size for inclusion thus differs among the variables, and is reported in the footnote to the tables at the ends of Parts Three, Four and Five.

The impact of sample size is greatest for the estimates of Medicare reimbursements, which are based on a 5% sample of Medicare claims. In the national volume, these estimates were based on a one-year sample (1993). To increase the precision of these estimates, the data for reimbursements presented in the regional Atlases are based on a two-year sample (1992-93); the denominators are the enrollee person-years for the same time period. The rates thus reflect the average annual rate for the two-year period, 1992-93.

About Rates in the Atlas

In order to make comparisons easier, all rates in the Atlas are expressed on a scale that results in at least one digit to the left of the decimal point (e.g., 98.4 primary care physicians per hundred thousand residents, 3.9 hospital beds per thousand residents). To achieve this, different denominators were used in calculating rates.

The levels of supply of hospital beds and hospital full time equivalent employees and registered nurses are expressed as beds, employees, and registered nurses per thousand residents of the hospital service area, based on American Hospital Association data and census calculations.

Expenditures and reimbursements are expressed as dollars per capita or per Medicare enrollee, based on American Hospital Association data, Medicare claims data, and census calculations.

The numbers of physicians providing services to residents of hospital service areas are expressed as physicians per hundred thousand residents, based on American Medical Association and American Osteopathic Association data and census calculations.

The numbers of surgical and diagnostic procedures performed are expressed as procedures per thousand Medicare enrollees in the hospital service area, (or as procedures per thousand male Medicare enrollees in the area, in the case of prostate procedures) based on Medicare claims data.

Patient day rates are expressed as total inpatient days per thousand Medicare enrollees, based on Medicare claims data.

Making Fair Comparisons Between Hospital Service Areas

Some communities have greater needs for health care services and resources than others; for example, in some communities in Florida, as many as 60% of residents are over age 65, while in other areas — including some with large college populations, or ski resorts — have much larger proportions of younger people. To ensure fair comparisons between areas, all rates in the Atlas have been adjusted to remove the differences that might be due to the different age and sex composition of local populations. This adjustment avoids identifying some areas as having high rates of utilization simply because of their larger proportions of elderly residents. When data were available, rates have also been adjusted for differences in race. The methods used to adjust these rates are explained in Part Nine of the national volume of the Dartmouth Atlas of Health Care.

Some areas, such as major urban centers, have higher costs of living than others. Such areas are likely to have high health care expenditures because the costs of personnel, real estate, and supplies are higher, and not necessarily because they are providing more services. Adjusting for such variation provides a more comparable measure of differences in real health care spending, that is not simply due to differences in costs of living among areas. To ensure fair comparisons of health care expenditures, hospital expenditure rates and Medicare reimbursement rates were adjusted to take into account the differences between hospital service areas in costs of living.

The methods used to adjust for age, sex, race, and price of medical care are detailed in Part Nine of the national volume of the Dartmouth Atlas of Health Care.

Communicating With Us About the Atlas

Our Atlas Home Page on the World Wide Web contains Atlas information, including a summary of Dartmouth related research and electronic copies of some hard-to-find references. Please send us your comments on the Atlas, particularly suggestions on how to improve it in the future.

We are at http://www.dartmouth.edu/~atlas

Part One

The Geography of Health Care in the New England States

The Geography of Health Care in the New England States

The use of health care resources in the New England States, like their use in the United States as a whole, is highly localized. Most Americans use the services of physicians whose practices are nearby. Physicians, in turn, are usually affiliated with hospitals that are near their practices. As a result, when patients are admitted to hospitals, the admission generally takes place within a relatively short distance of where the patient lives. Although the distances from homes to hospitals vary with geography — people who live in rural areas travel farther than those who live in cities — in general most patients are admitted to a hospital which provides an appropriate level of care close to where they live.

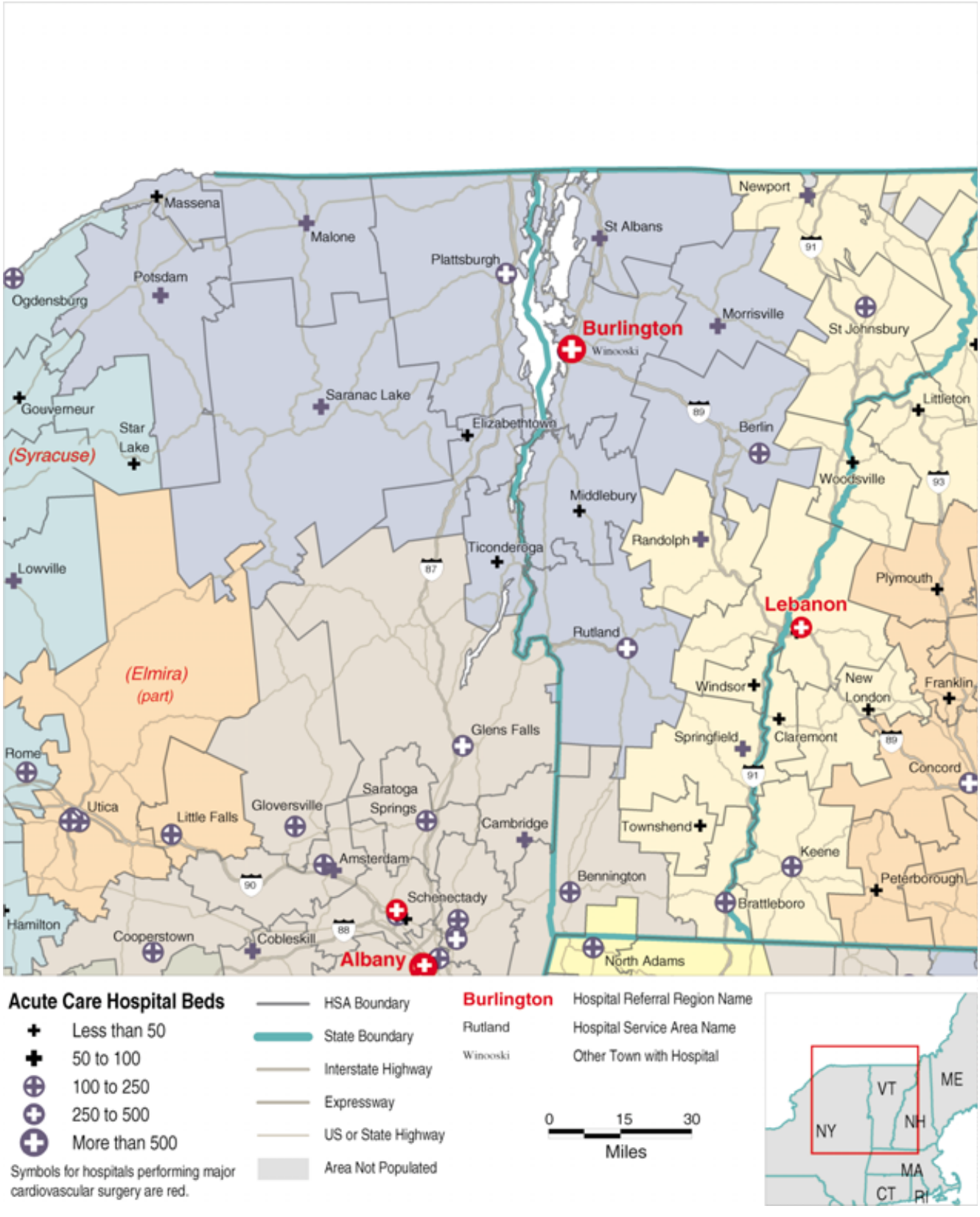
The Medicare program maintains exhaustive records of hospitalizations, which makes it possible to define the patterns of use of hospital care. When Medicare enrollees are admitted to hospitals, the program's records identify both the patients' places of residence (by ZIP Code) and the hospitals where the admissions took place (by a unique numerical identifier). These files provide a reliable basis for determining the geographic pattern of health care use, because research shows that the migration patterns of patients in the Medicare program are similar to those for younger patients.

Medicare records of hospitalizations were used to define 3,436 geographically distinct hospital service areas in the United States. In each hospital service area, most of the care received by Medicare patients is provided by hospitals within the area. There are 166 of these hospital service areas in the New England States. The maps in this section show the location of each of these areas. Hospital service areas have been further aggregated into hospital referral regions, based on the pattern of use of cardiac surgery and neurosurgery. The maps also show the hospital referral regions to which the hospital service areas belong.

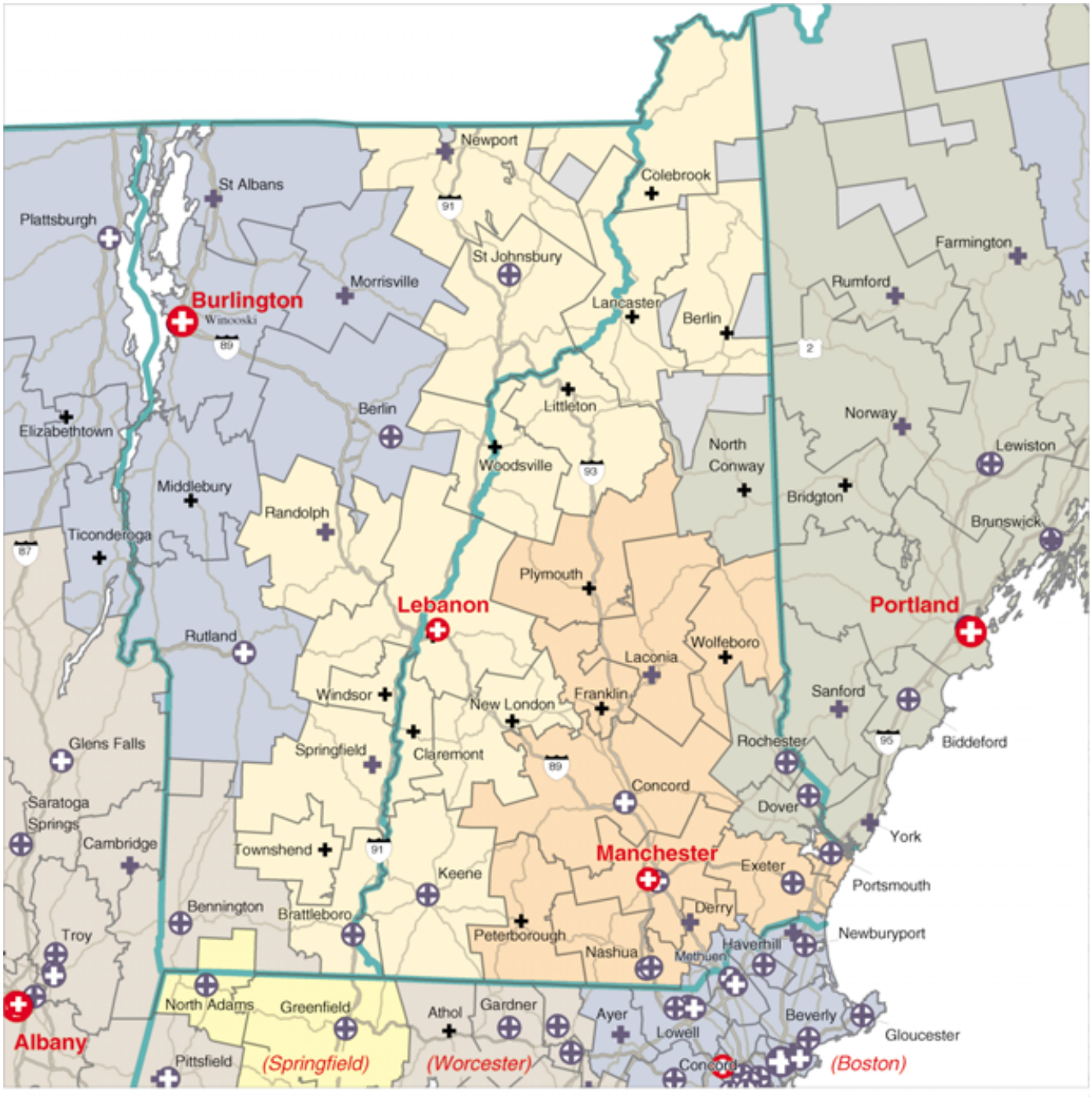
A detailed description of how hospital service areas and hospital referral regions were defined, and of the methodologies used to create the Atlas of Health Care in the

New England States, is included in Part Nine of the national volume of the Dartmouth Atlas of Health Care. Population size in the hospital service areas in the New England States is given in Tables 2 and 4. The numbers of Medicare enrollees in each hospital service area are given in Tables 3 and 5.

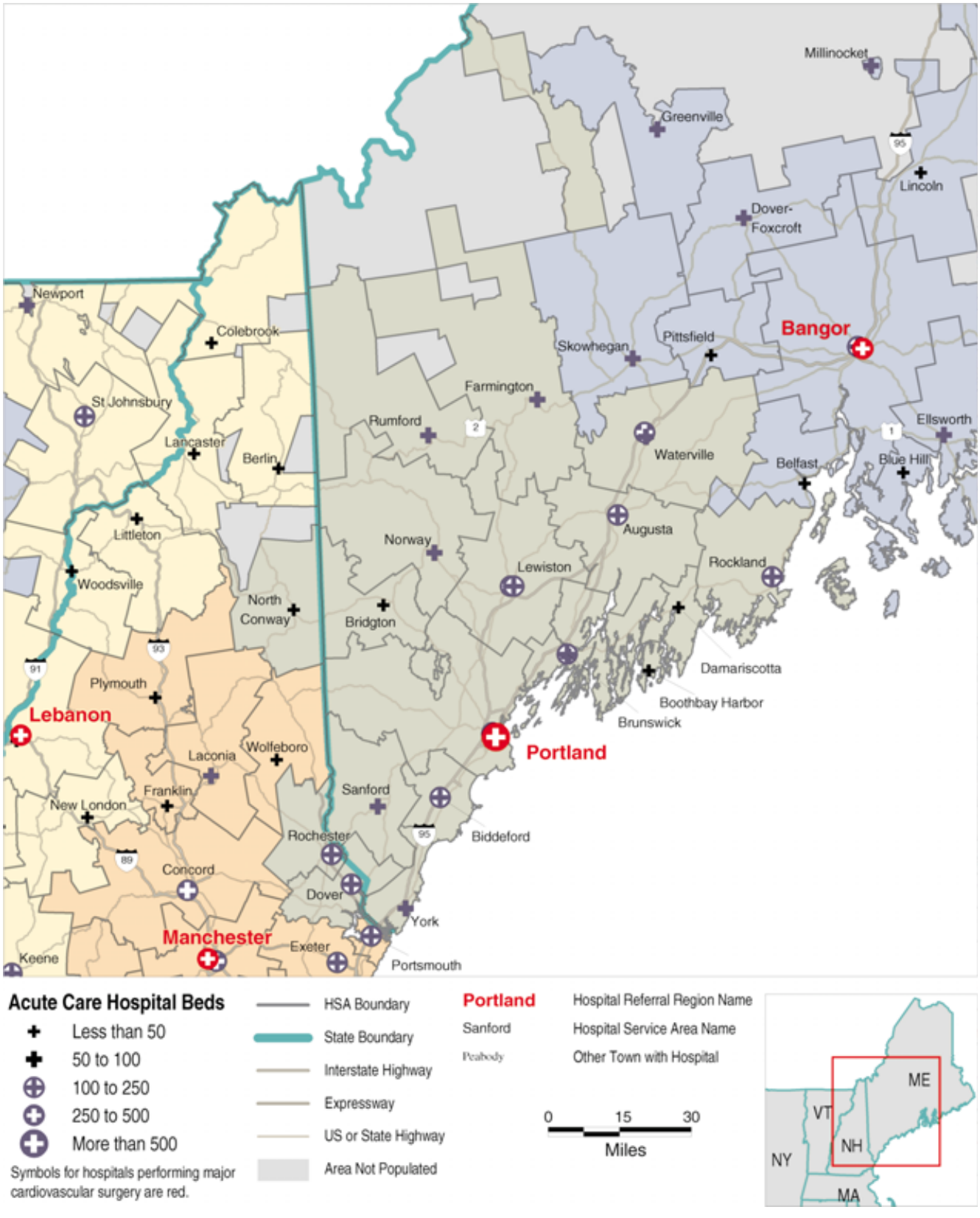
Hospital Services Areas Assigned to the Burlington, VT Hospital Referral Region



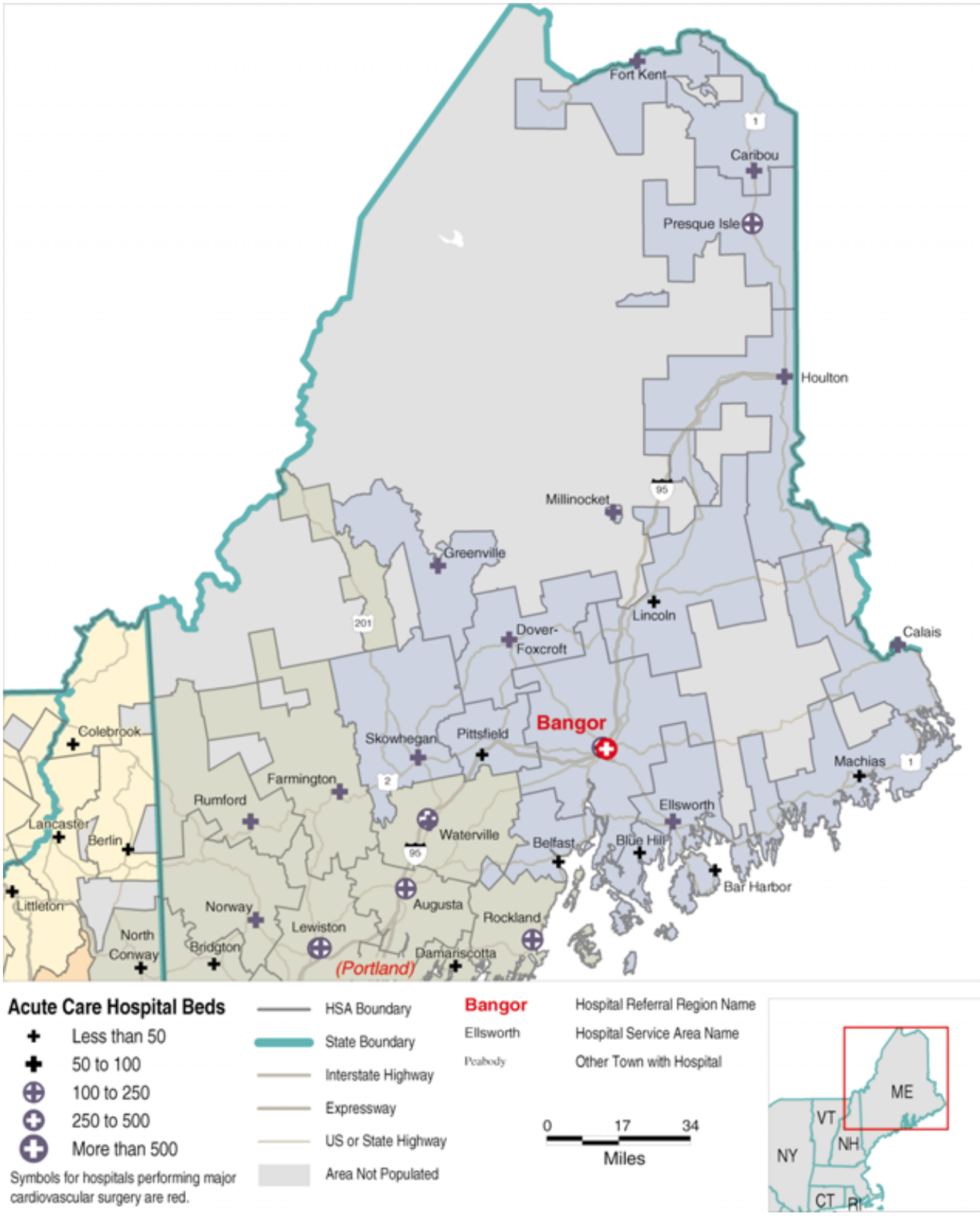
Hospital Services Areas Assigned to the Lebanon and Manchester, NH Hospital Referral Regions



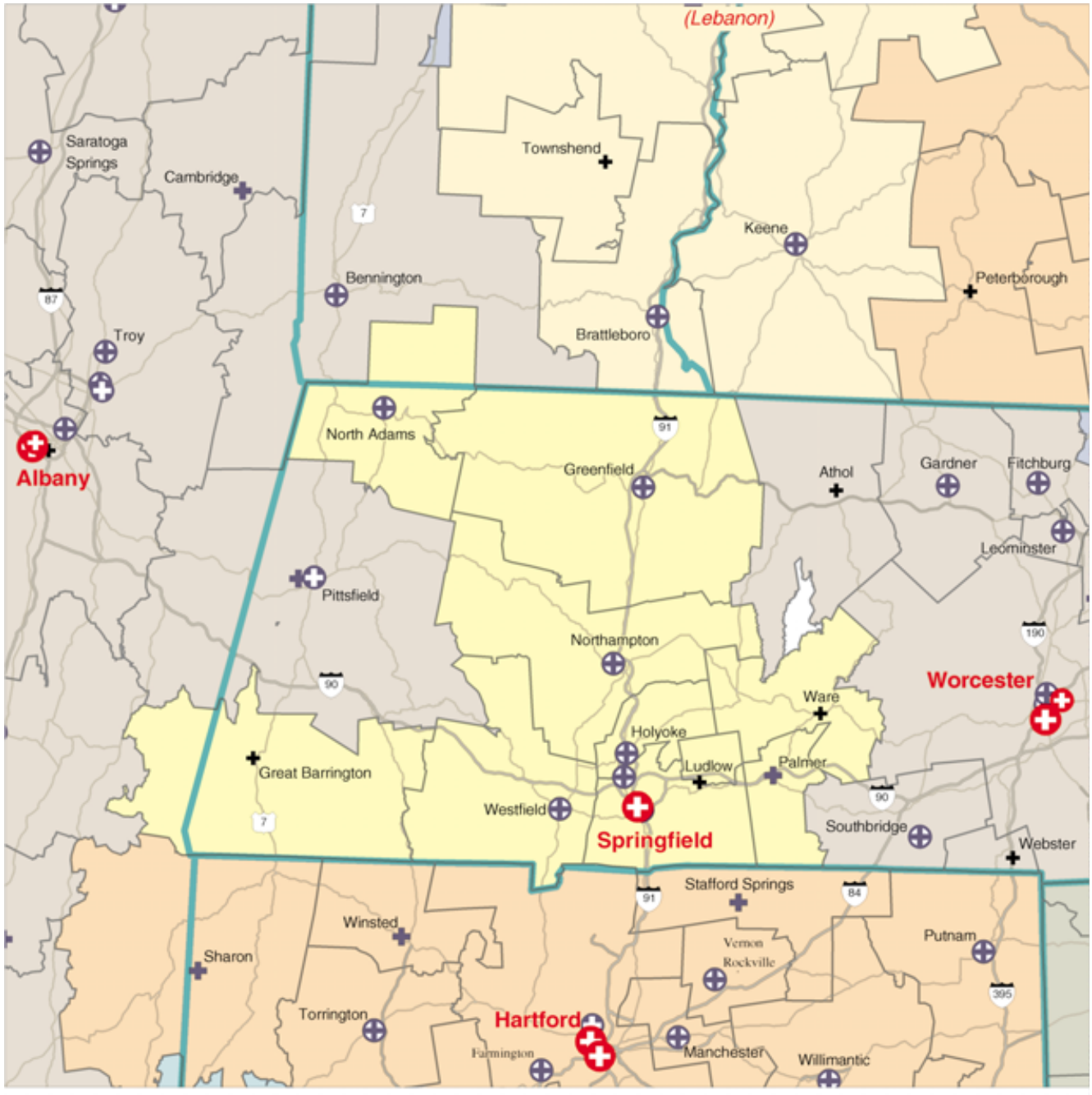
Hospital Services Areas Assigned to the Portland, ME Hospital Referral Region



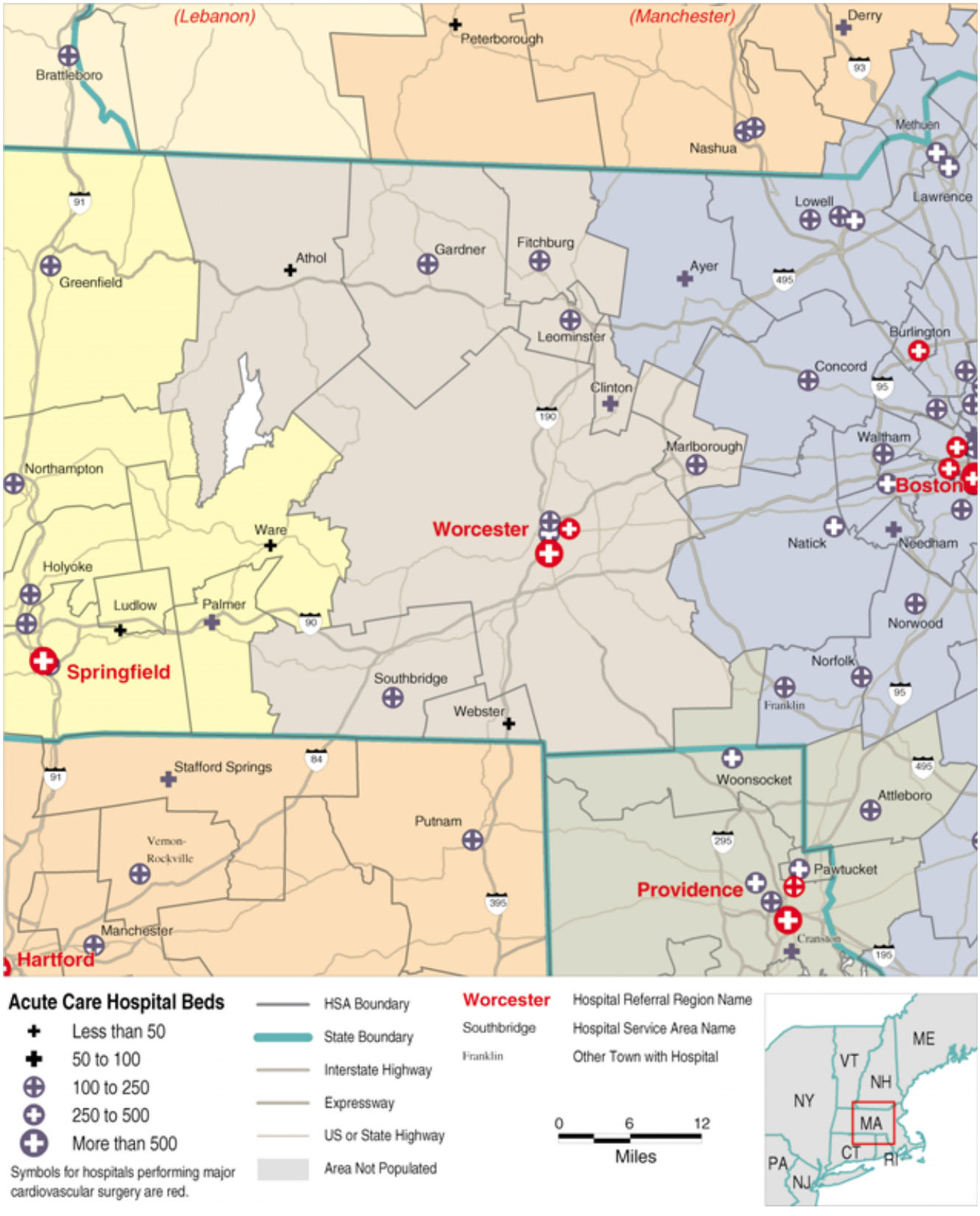
Hospital Services Areas Assigned to the Bangor, ME Hospital Referral Region



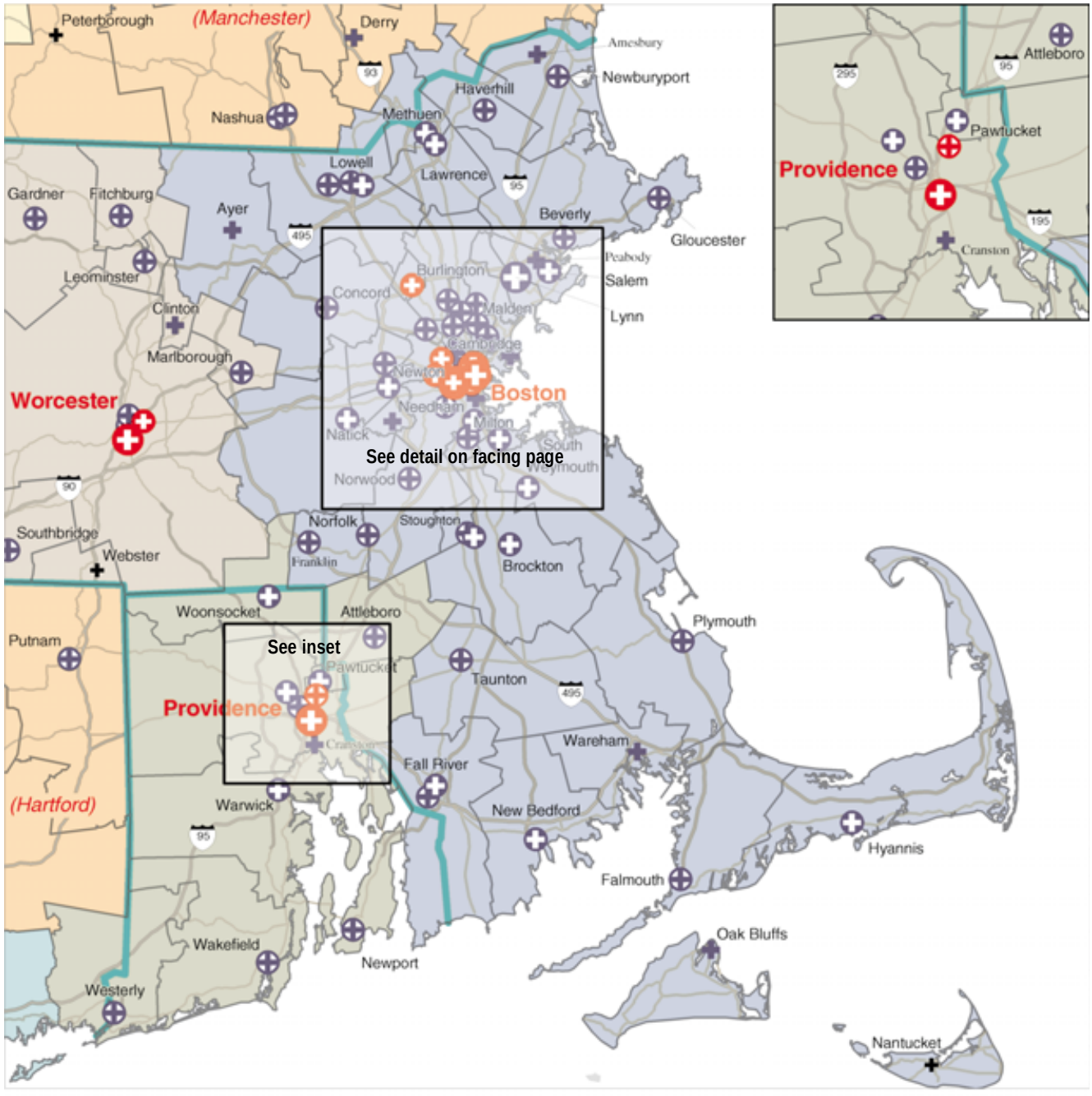
Hospital Services Areas Assigned to the Springfield, MA Hospital Referral Region



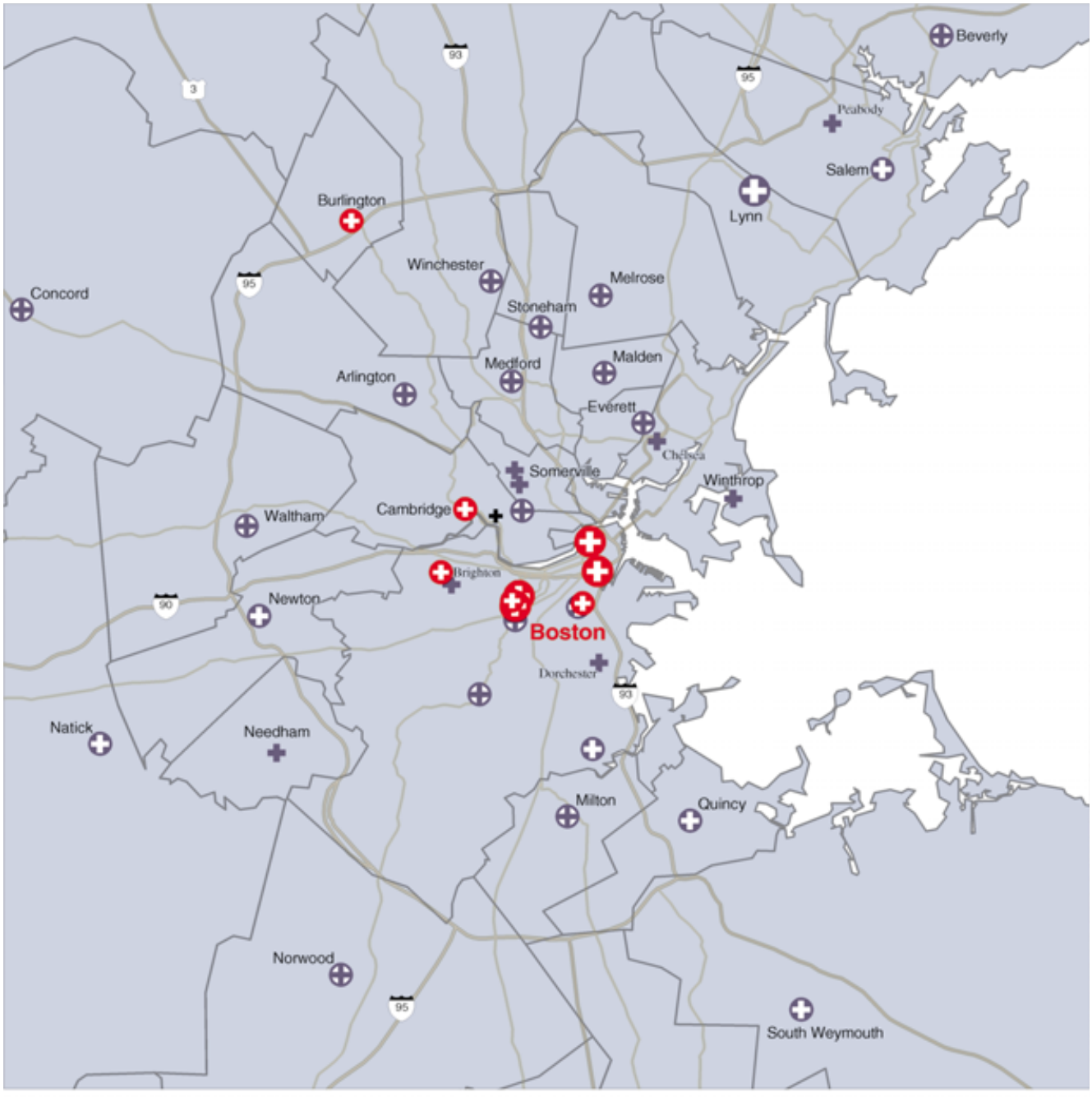
Hospital Services Areas Assigned to the Worcester, MA Hospital Referral Region



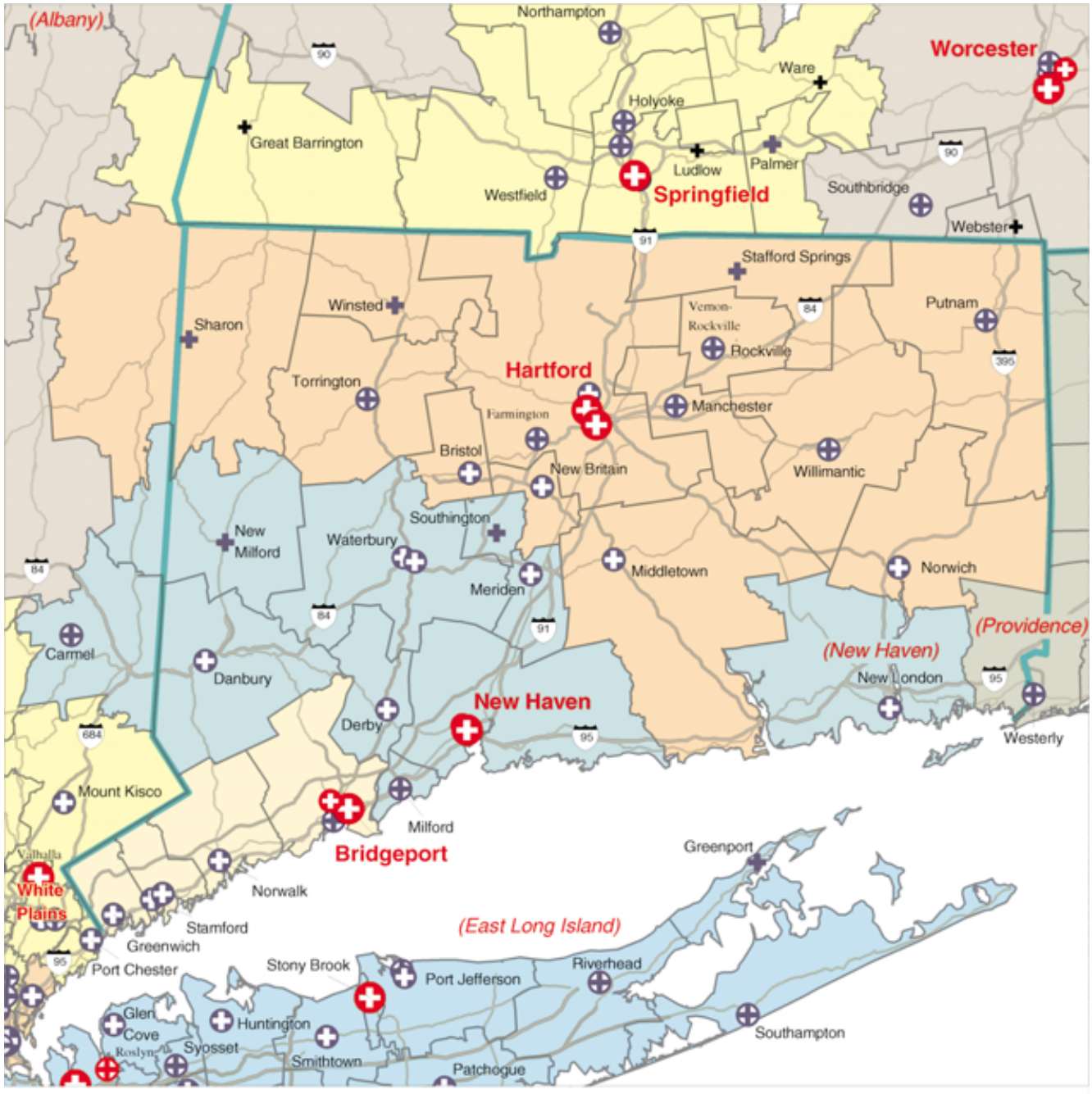
Hospital Services Areas Assigned to the Boston, MA and Providence, RI Hospital Referral Regions



Detail of Hospital Services Areas Assigned to the Boston, MA Hospital Referral Region



Hospital Services Areas Assigned to the Bridgeport, Hartford and New Haven, CT Hospital Referral Regions



Acute Care Hospital Beds

- Less than 50
- 50 to 100
- 100 to 250
- 250 to 500
- More than 500

Symbols for hospitals performing major cardiovascular surgery are red.

- HSA Boundary
- State Boundary
- Interstate Highway
- Expressway
- US or State Highway
- Area Not Populated

Hartford Hospital Referral Region Name

Danbury Hospital Service Area Name

Farmington Other Town with Hospital

0 8 16

Miles

PART TWO

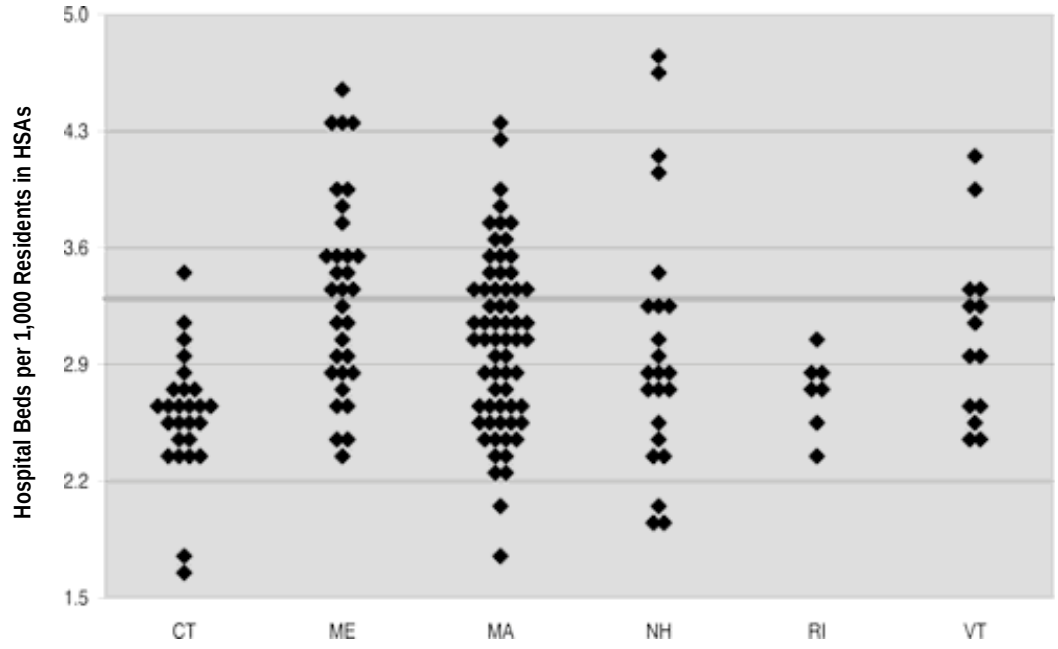
Acute Care Hospital Resources and Expenditures in the New England States

This section provides measures of the allocation of hospital resources to the populations living in hospital service areas in the New England States. Data from the American Hospital Association and the Medicare program were used to estimate the numbers of staffed hospital beds, full time equivalent hospital employees, registered nurses employed in acute care hospitals, and hospital expenditures allocated to care for the population of each region. The population count is from the 1990 United States census.

The estimates for resource allocations presented in the Atlas have been adjusted for differences in age and sex, and in the case of expenditures, for regional differences in prices. The allocation method adjusts for patient migration to hospitals located outside of the hospital service area where the patient resides. Part Nine of the national volume of the Dartmouth Atlas of Health Care explains how these adjustments were made.

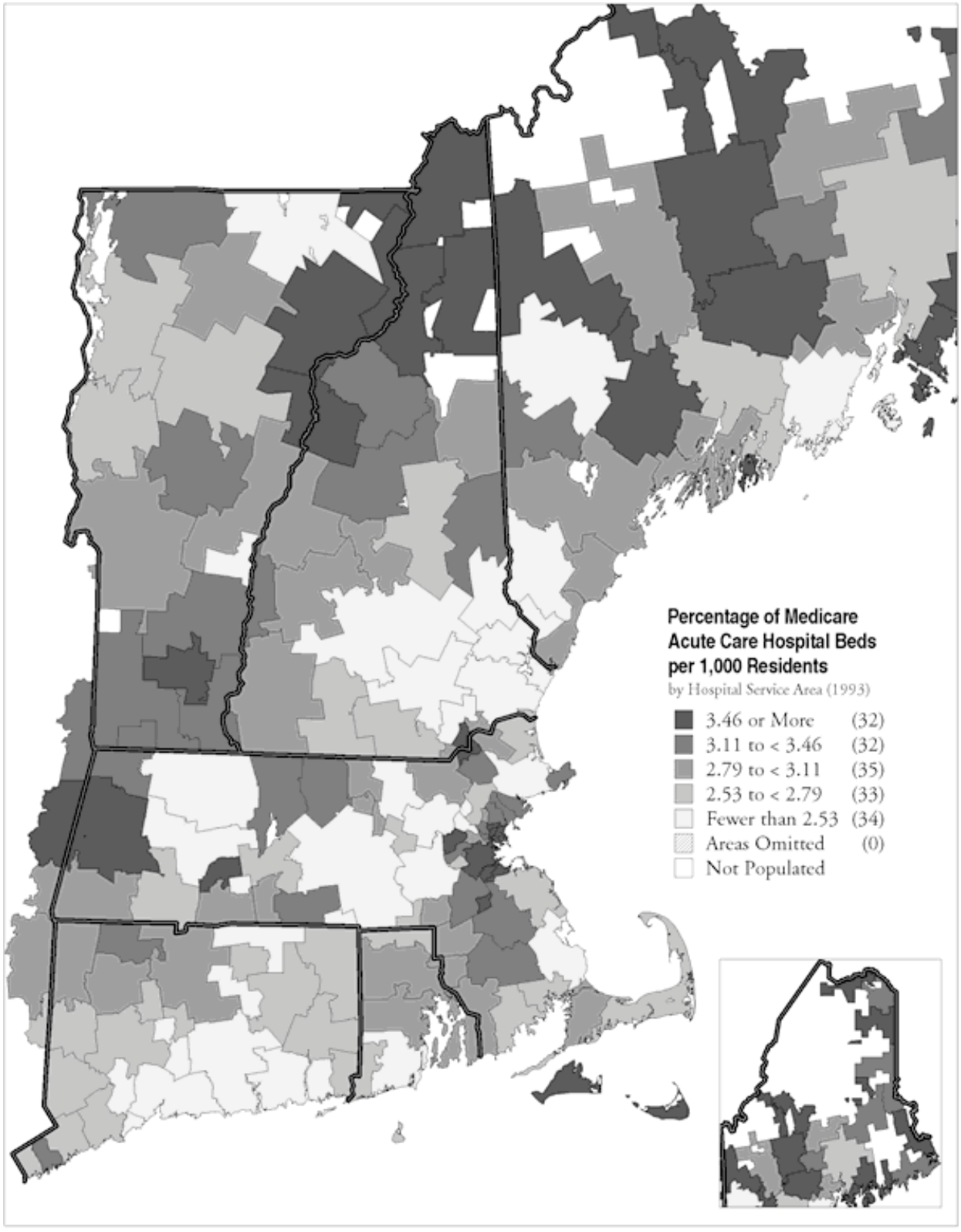
Acute Care Hospital Beds

The numbers of acute care hospital beds per thousand residents varied more in some New England states than in others; the range was narrower in Connecticut and Rhode Island than in Maine, Massachusetts, and New Hampshire. Among the region's larger cities, the supply of beds was generally lower than the United States average of 3.3 beds per thousand, except in Boston, which had 3.7, about 12% higher than the national average and about 54% higher than in demographically similar New Haven, Connecticut, which had 2.4 beds per thousand. Portland, Maine, had 2.9 beds per thousand; Providence, Rhode Island, had 2.8; Burlington, Vermont, had 2.6; and Manchester, New Hampshire, had 2.5.



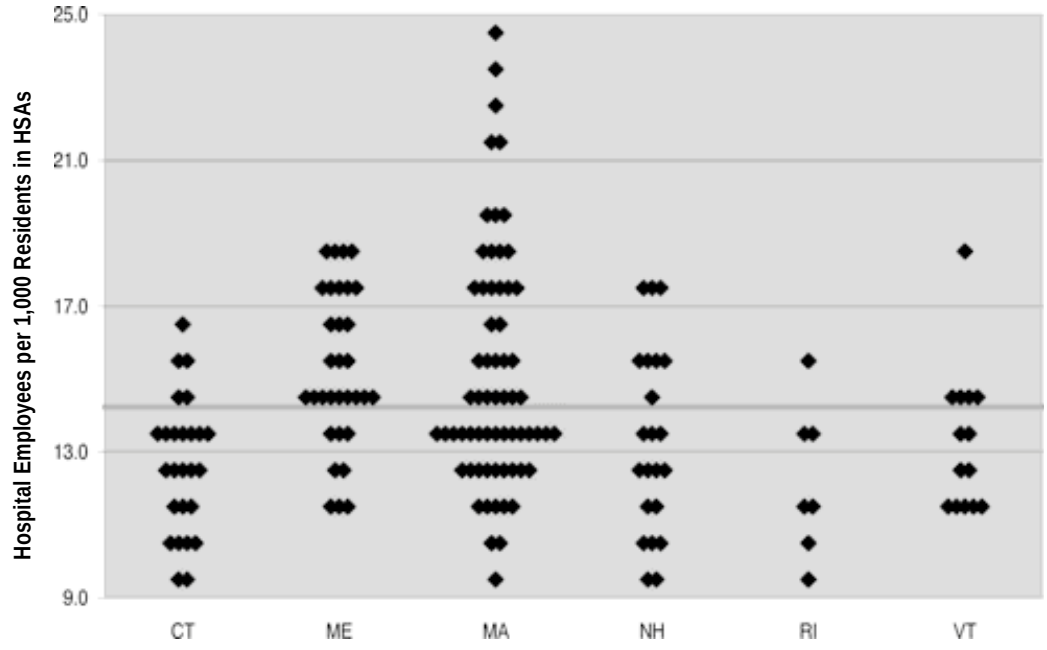
The New England States. The gray horizontal line represents the United States average.

Figure 2.1. Acute Care Hospital Beds Allocated to Hospital Service Areas in the New England States (1993)
The number of acute care hospital beds per thousand residents, after adjusting for differences in the age and sex of the local population, ranged from fewer than 1.8 to more than 4.5. Each point represents one hospital service area.


Percentage of Medicare
Acute Care Hospital Beds
per 1,000 Residents
by Hospital Service Area (1993)
3.46 or More (32)
3.11 to < 3.46 (32)
2.79 to < 3.11 (35)
2.53 to < 2.79 (33)
Fewer than 2.53 (34)
Areas Omitted (0)
Not Populated

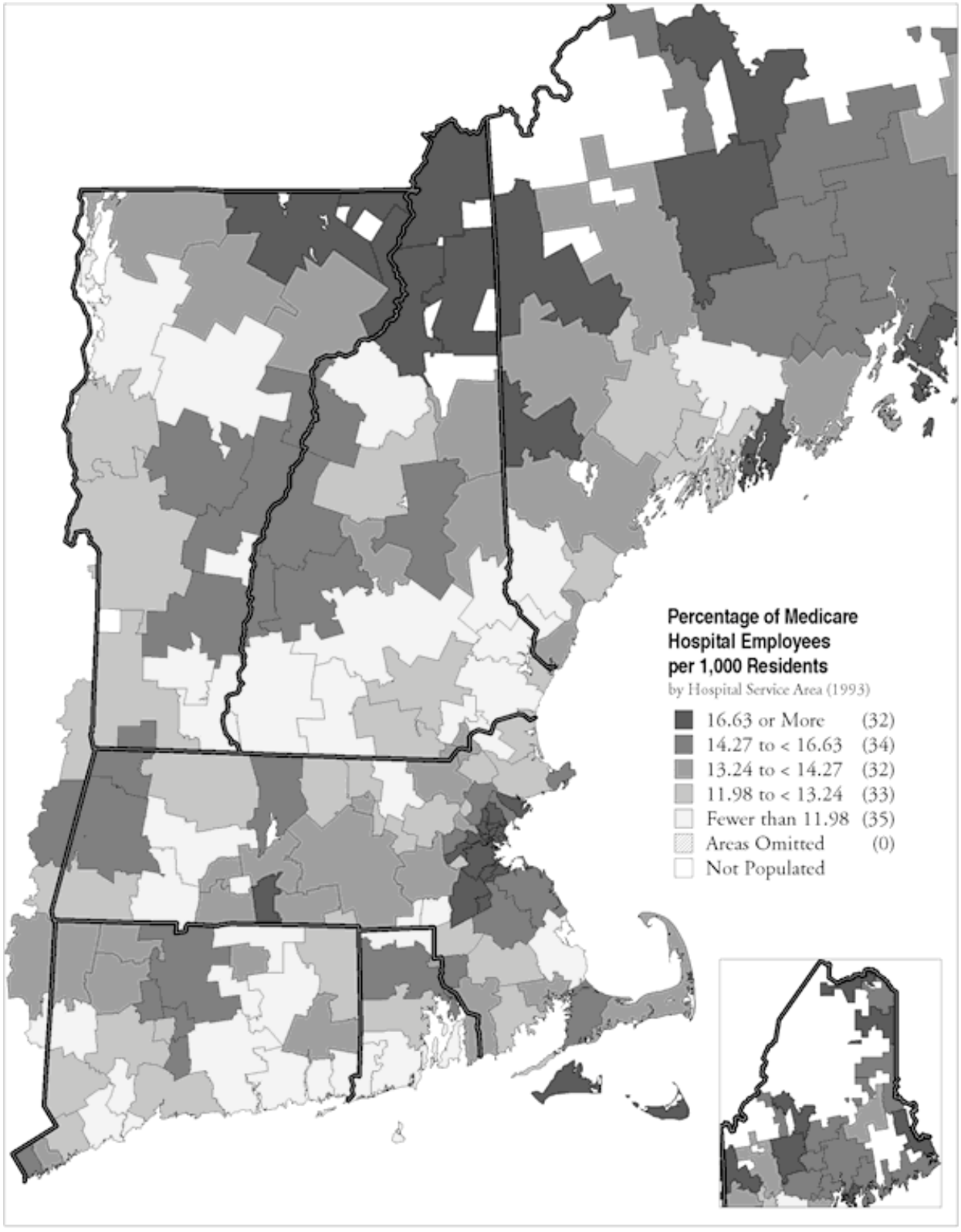
Acute Care Hospital Employees

The numbers of full time equivalent hospital employees allocated to the populations of hospital service areas was higher in Eastern Massachusetts than elsewhere in the New England States. Boston (25.0); Malden (22.7); and Everett (21.6) were all at least 50% higher than the national average of 14.2 hospital employees per thousand residents. Manchester, New Hampshire, with 12.0 hospital employees per thousand, Burlington, Vermont, with 11.5, and New Haven, Connecticut, with 12.9, were all below the national average. The cities of Derry and Exeter, New Hampshire, had rates that were less than two-thirds of the national average.



The New England States. The gray horizontal line represents the United States average.

Figure 2.2. Hospital Employees Allocated to Hospital Service Areas in the New England States (1993)
The number of full time equivalent hospital employees per thousand residents, after adjusting for differences in the age and sex of the local population, ranged from fewer than 10 to more than 24. Each point represents one hospital service area.


Percentage of Medicare
Hospital Employees
per 1,000 Residents
by Hospital Service Area (1993)
16.63 or More (32)
14.27 to < 16.63 (34)
13.24 to < 14.27 (32)
11.98 to < 13.24 (33)
Fewer than 11.98 (35)
Areas Omitted (0)
Not Populated

Registered Nurses Employed in Acute Care Hospitals

The number of registered nurses employed by acute care hospitals in the New England States was generally higher in Maine, Massachusetts, and New Hampshire than in Connecticut and Rhode Island; the greatest range of variation was observed in Massachusetts, which had 5.4 registered nurses per thousand residents of the Boston hospital service area and 2.1 per thousand in the Northampton hospital service area. New Haven, Connecticut (2.9); Burlington, Vermont (3.1); Manchester, New Hampshire (3.2); and Portland, Maine (3.3) all had hospital-based registered nurse workforces below the national average of 3.5 per thousand.

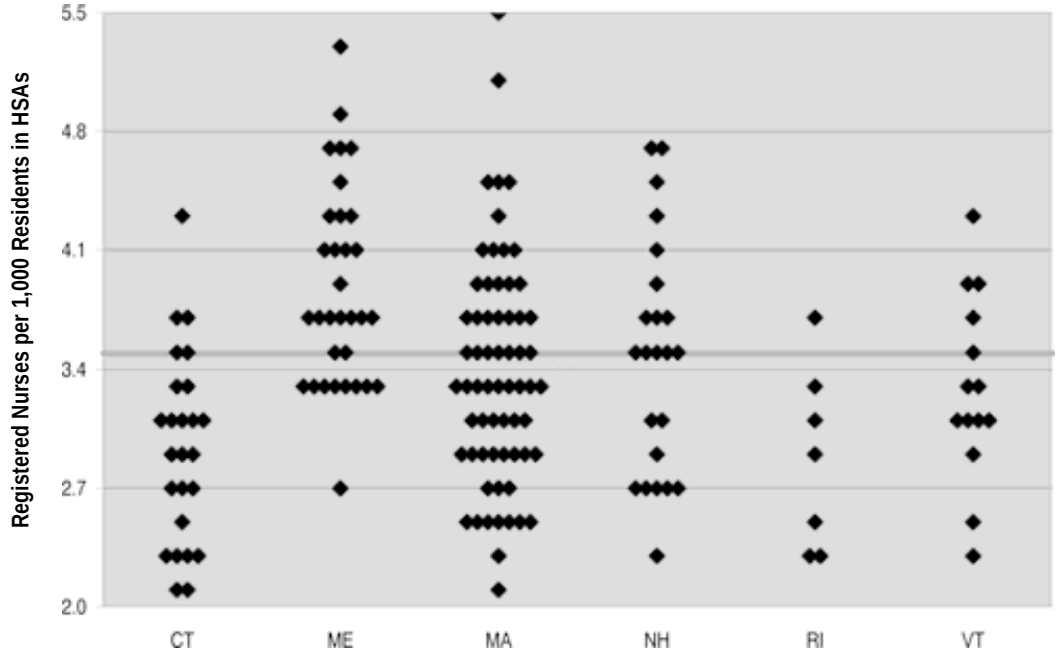
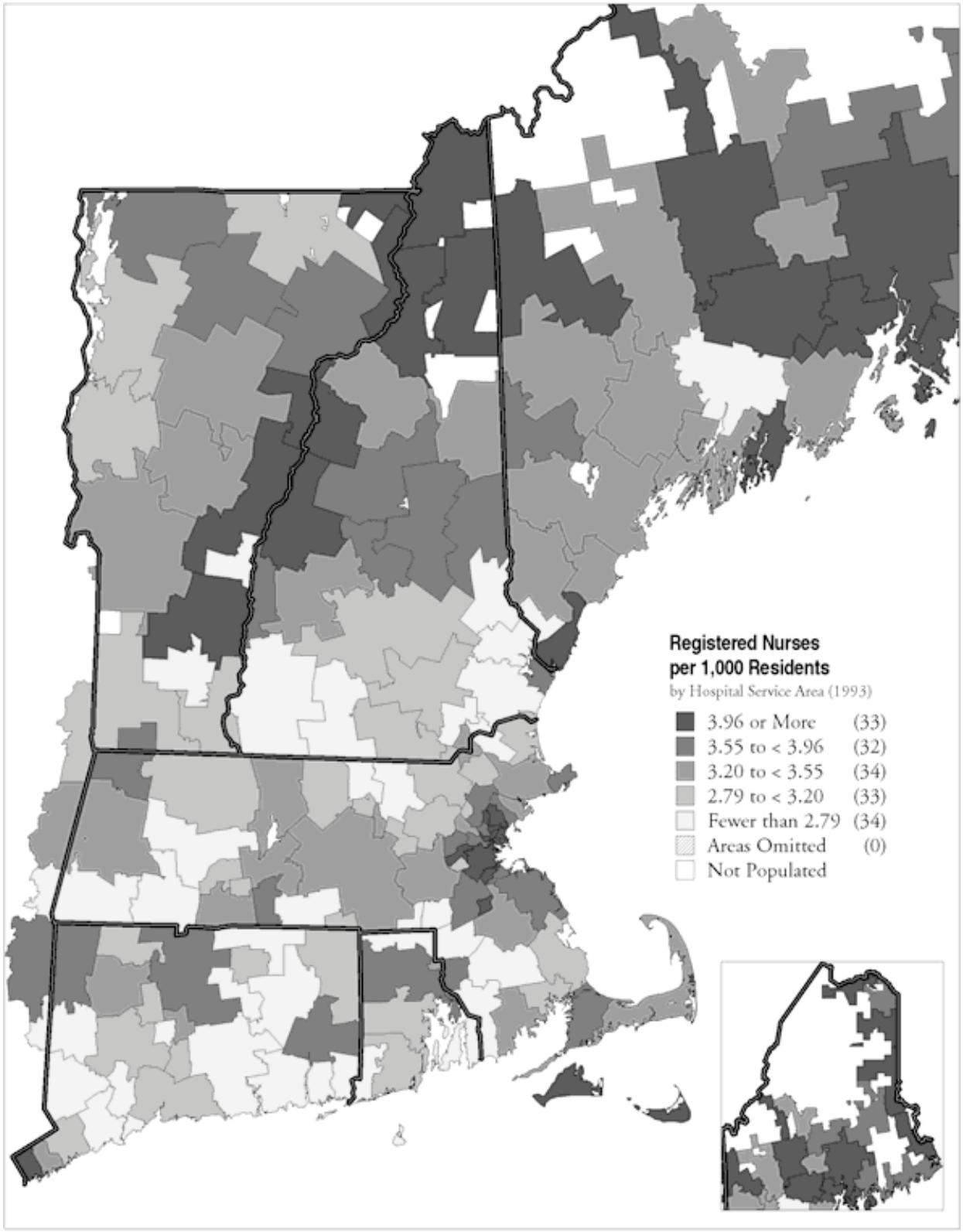


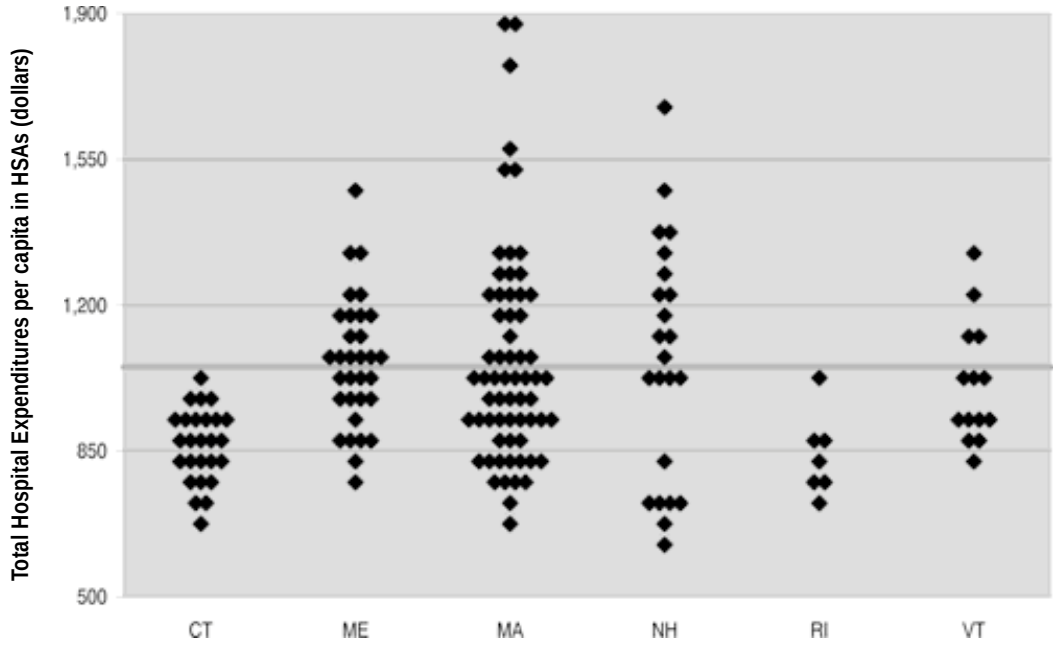
Figure 2.3. Hospital-Based Registered Nurses Allocated to Hospital Service Areas in the New England States (1993)

The acute care hospital-employed registered nurse workforce per thousand residents, after adjusting for differences in the age and sex of the local population, ranged from about 2.0 to more than 5.5. Each point represents one hospital service area.


Registered Nurses
per 1,000 Residents
by Hospital Service Area (1993)
3.96 or More (33)
3.55 to < 3.96 (32)
3.20 to < 3.55 (34)
2.79 to < 3.20 (33)
Fewer than 2.79 (34)
Areas Omitted (0)
Not Populated

Total Acute Care Hospital Expenditures

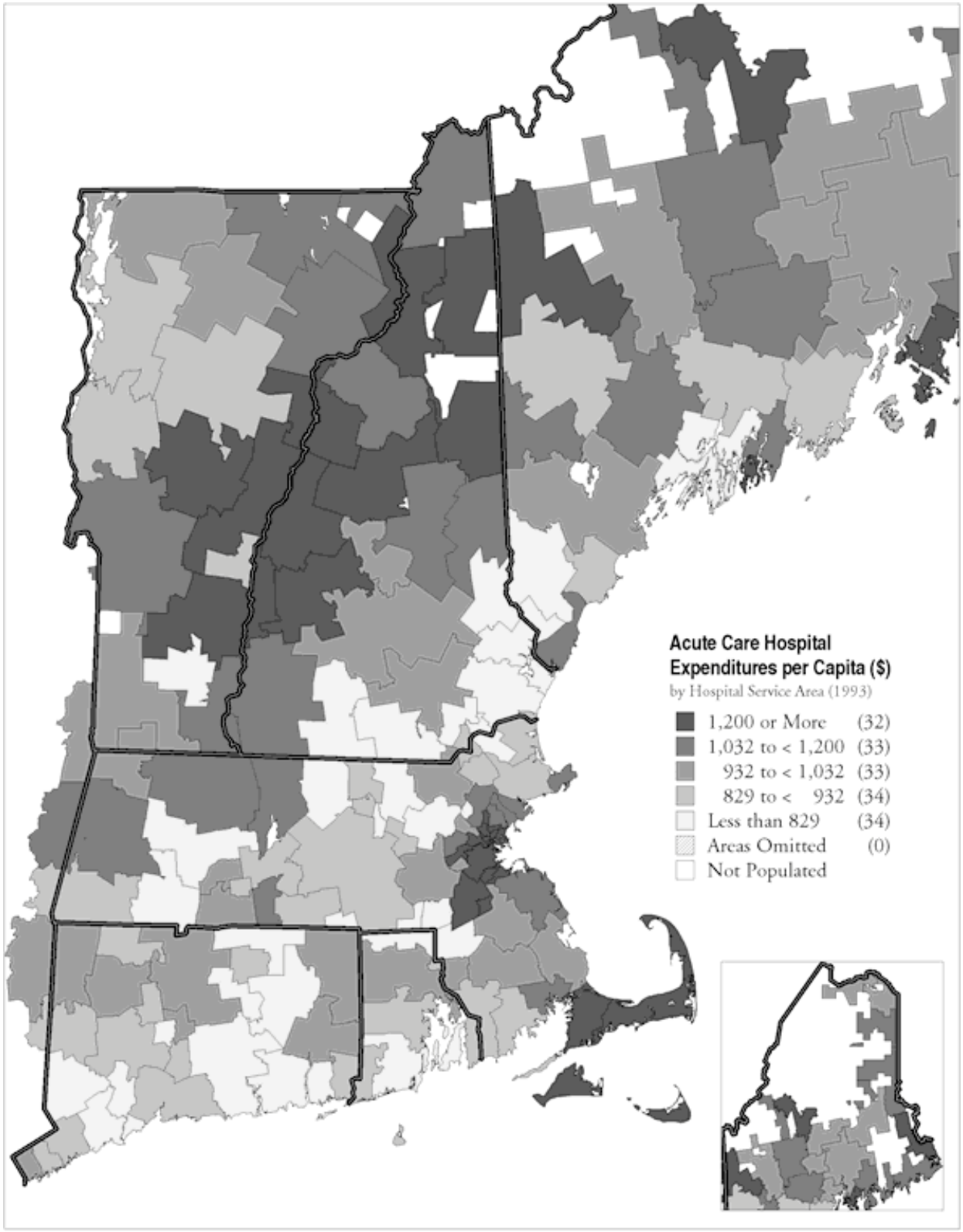
The range in per capita expenditures for inpatient and outpatient care in the New England States was greatest in Massachusetts; Boston's per capita expenditure of $1,889 was nearly three times as high as Northampton's, at $672. New Hampshire also demonstrated a wide range of per capita expenditures, from less than $650 in some smaller hospital service areas to $1,689 in the Lebanon area. Burlington, Vermont ($863); New Haven, Connecticut ($918); Portland, Maine ($992); Manchester, New Hampshire ($1,004); and Providence, Rhode Island ($1,015) were all below the United States average level of per capita spending for hospital care.



The New England States. The gray horizontal line represents the United States average.

Figure 2.4. Price Adjusted Acute Care Hospital Expenditures Allocated to Hospital Service Areas in the New England States (1993)

Price adjusted per capita expenditures for inpatient and outpatient care delivered by acute care hospitals varied by a factor of almost 3, from less than $700 to nearly $1,900. Each point represents one hospital service area.


Acute Care Hospital
Expenditures per Capita ($)
by Hospital Service Area (1993)
1,200 or More (32)
1,032 to < 1,200 (33)
932 to < 1,032 (33)
829 to < 932 (34)
Less than 829 (34)
Areas Omitted (0)
Not Populated

Benchmarking: Acute Care Hospital Beds

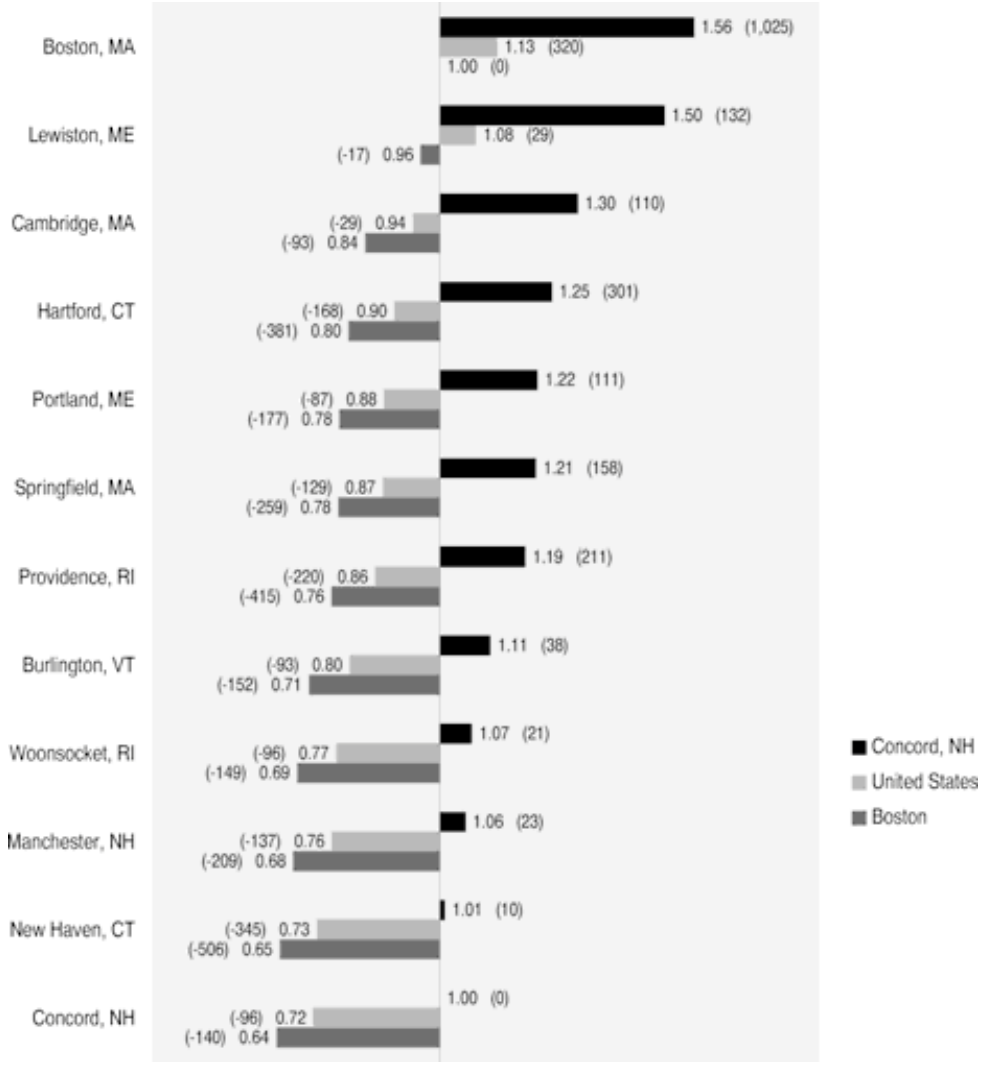


Figure 2.5. Acute Care Hospital Beds Allocated to Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Areas (1993)

The figure gives the ratio of acute care hospital beds in selected hospital service areas to the highest and lowest ranked areas. It also compares selected areas to the U.S. average. The number of beds above (+) or below (-) the number of beds predicted by the experience in the benchmark area in 1993 is in parentheses. For example, the number of beds per 1,000 allocated to the residents of Boston was 1.56 times higher than Concord, New Hampshire. If the Concord benchmark in 1993 had been attained for the residents of Boston, 1,025 fewer beds would have been needed.

Benchmarking: Acute Care Hospital Beds

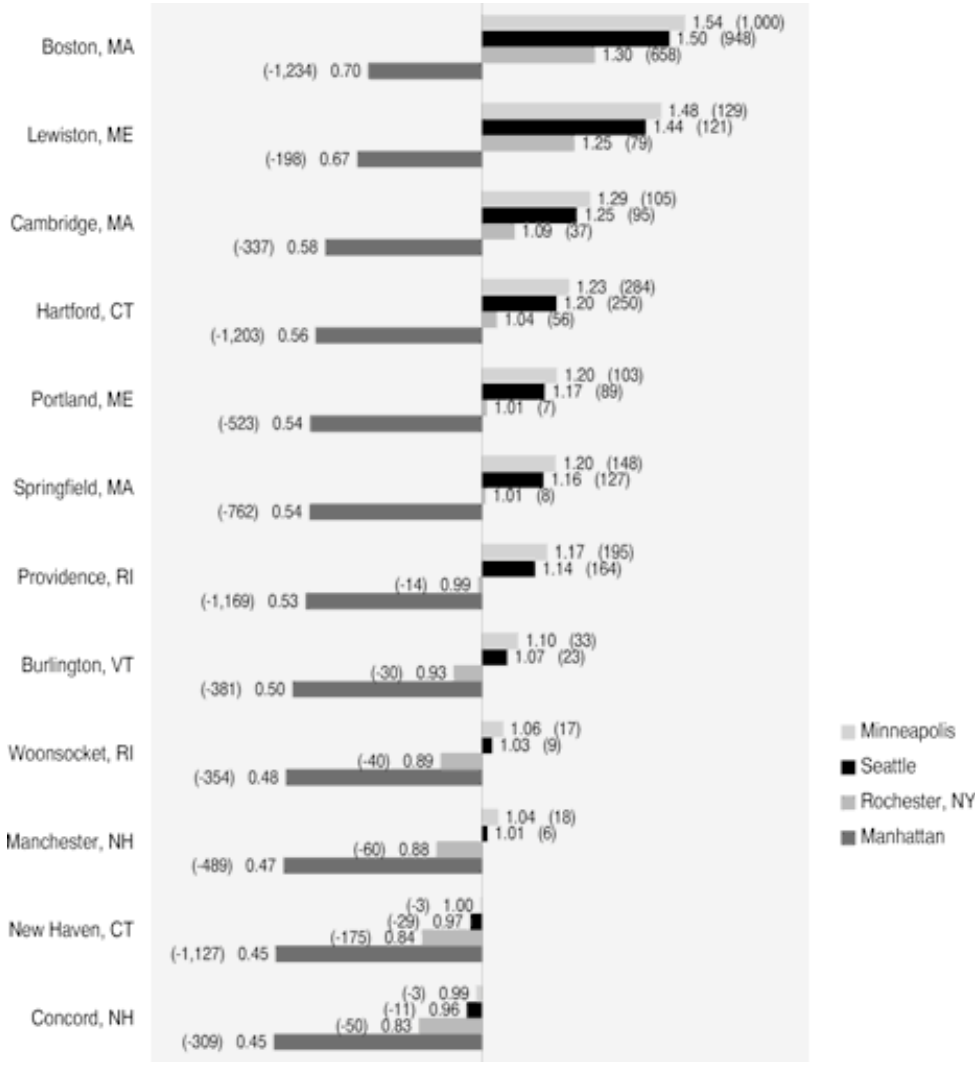


Figure 2.6. Acute Care Hospital Beds Allocated to Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1993)

The figure gives the ratio of acute care hospital beds in selected hospital service areas in the New England States to other areas. The number of beds above (+) or below (-) the number of beds predicted by the experience in the benchmark area is in parentheses. For example, the number of beds per 1,000 allocated to the residents of Boston was 1.54 times higher than Minneapolis. If the level of beds of the Minneapolis benchmark in 1993 had been attained for the residents of Boston, 1,000 fewer beds would have been needed. If the Manhattan benchmark had applied, 1,234 more beds would have been needed.

Benchmarking: Hospital Employees

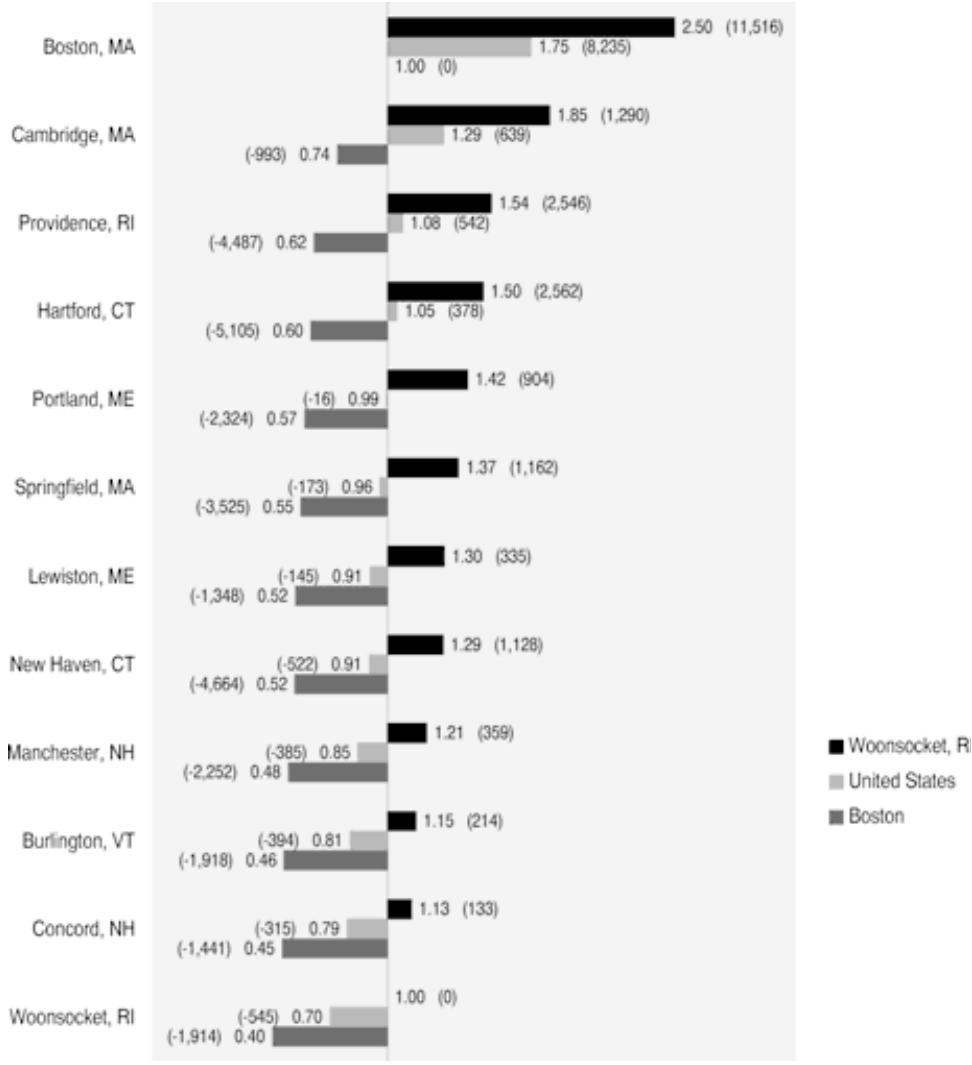


Figure 2.7 Hospital Employees Allocated to Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Areas (1993)

The figure gives the ratio of full time equivalent hospital employees in selected hospital service areas to the lowest and the highest ranked areas. It also compares each selected area to the U.S. average. The number of full time equivalent employees above (+) or below (-) the number predicted by the experience in the benchmark area for 1993 is in parentheses. For example, the number of employees per 1,000 allocated to the residents of Boston was 2.5 times higher than Woonsocket, Rhode Island. If the level of employment of the Woonsocket benchmark in 1993 had been attained for the residents of Boston, 11,516 fewer employees would have been needed.

Benchmarking: Hospital Employees

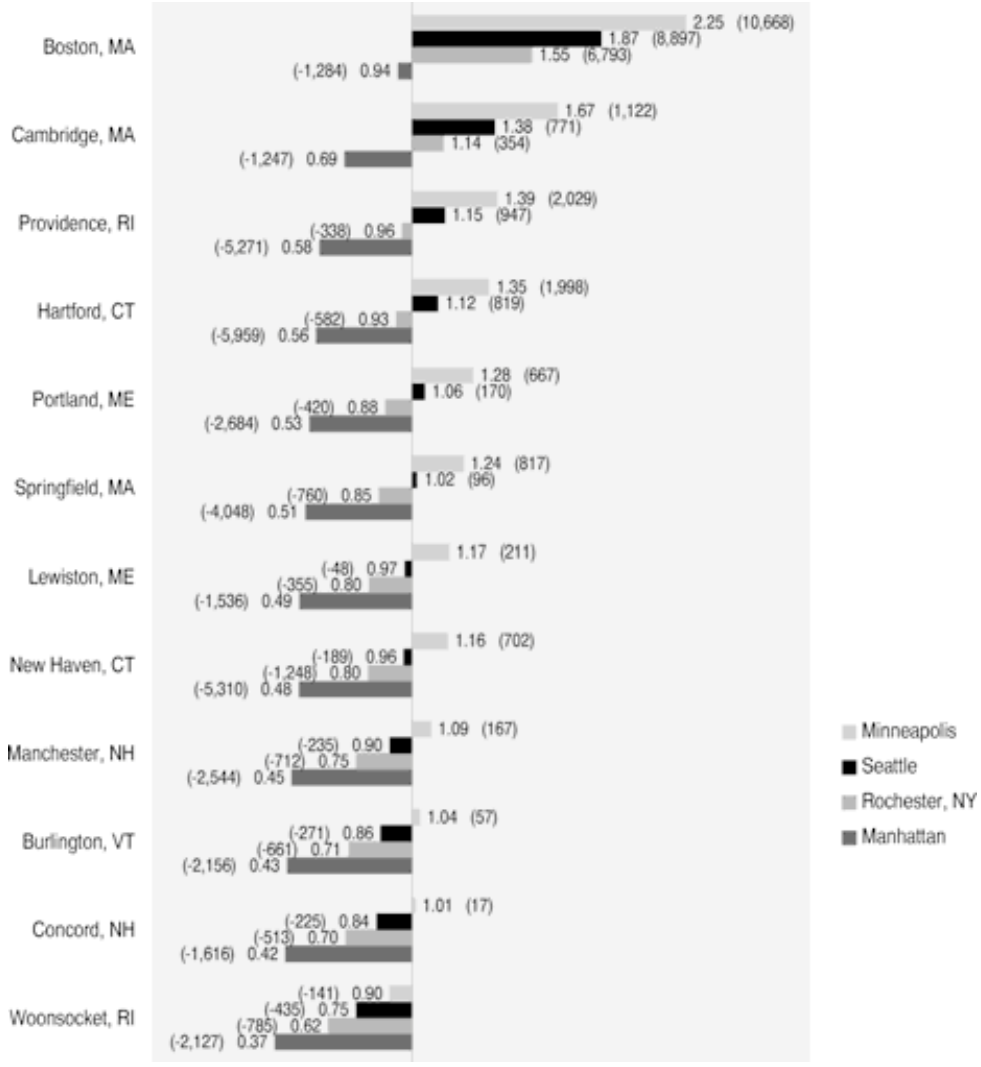


Figure 2.8. Employees Allocated to Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1993)

The figure gives the ratio of full time equivalent hospital employees in selected hospital service areas in the New England States to other areas. The number of employees above (+) or below (-) the number of employees predicted by the experience in the benchmark area is in parentheses. For example, the number of employees per 1,000 allocated to the residents of Boston was 2.25 times higher than Minneapolis. If the level of employment of the Minneapolis benchmark in 1993 had been attained for the residents of Boston, 10,668 fewer employees would have been needed. If the Manhattan benchmark had applied, 1,284 more employees would have been needed.

Benchmarking: Hospital-Based Registered Nurses

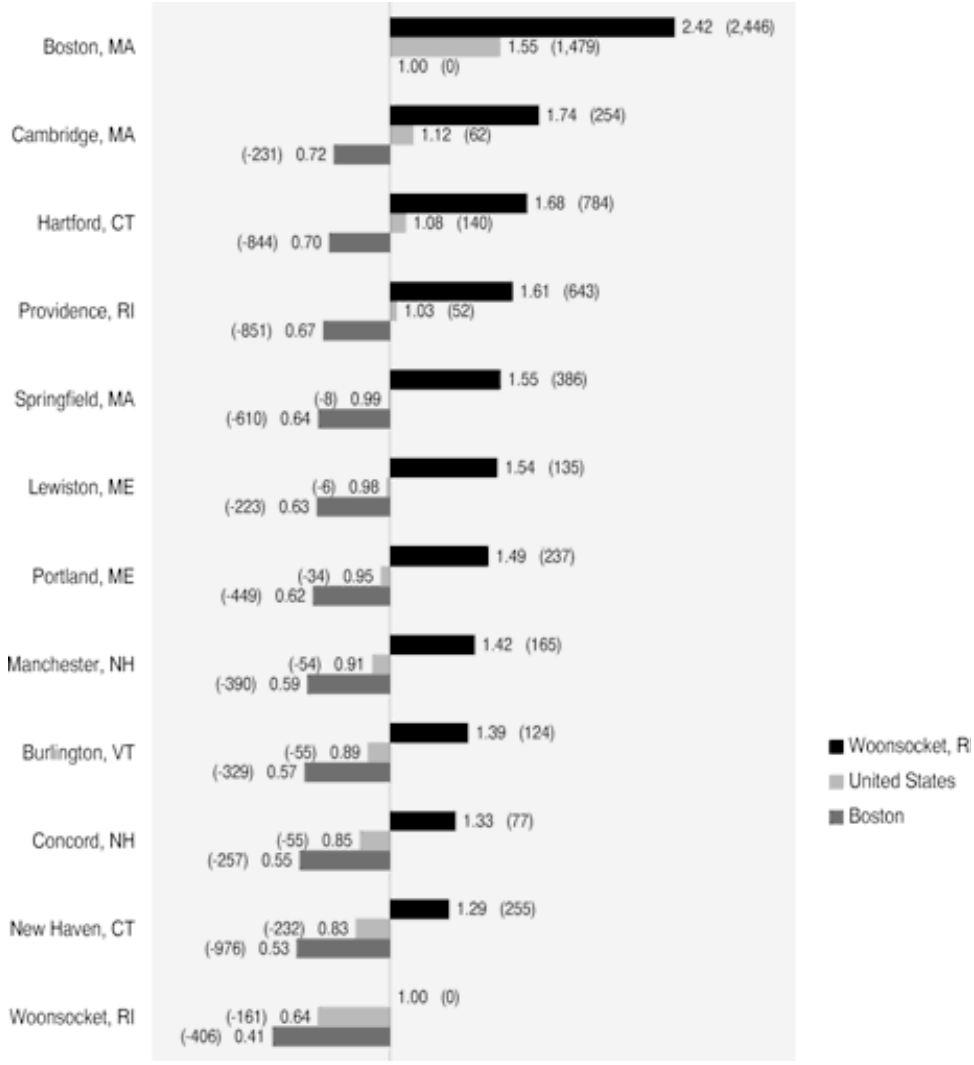


Figure 2.9. Hospital-Based Registered Nurses Allocated to Selected Hospital Service Areas in the New England States Compared to Highest and Lowest Ranked Selected Areas (1993)

The figure gives the ratio of hospital-employed registered nurses in selected hospital service areas to the lowest and the highest ranked areas. It also compares each selected area to the U.S. average. The number of hospital-based registered nurses above (+) or below (-) the number predicted by the experience in the benchmark area for 1993 is in parentheses. For example, the number of nurses per 1,000 allocated to the residents of Boston was 2.42 times higher than Woonsocket, Rhode Island. If the level of employment of the Woonsocket benchmark in 1993 had been attained for the residents of Boston, 2,446 fewer nurses would have been needed.

Benchmarking: Hospital-Based Registered Nurses

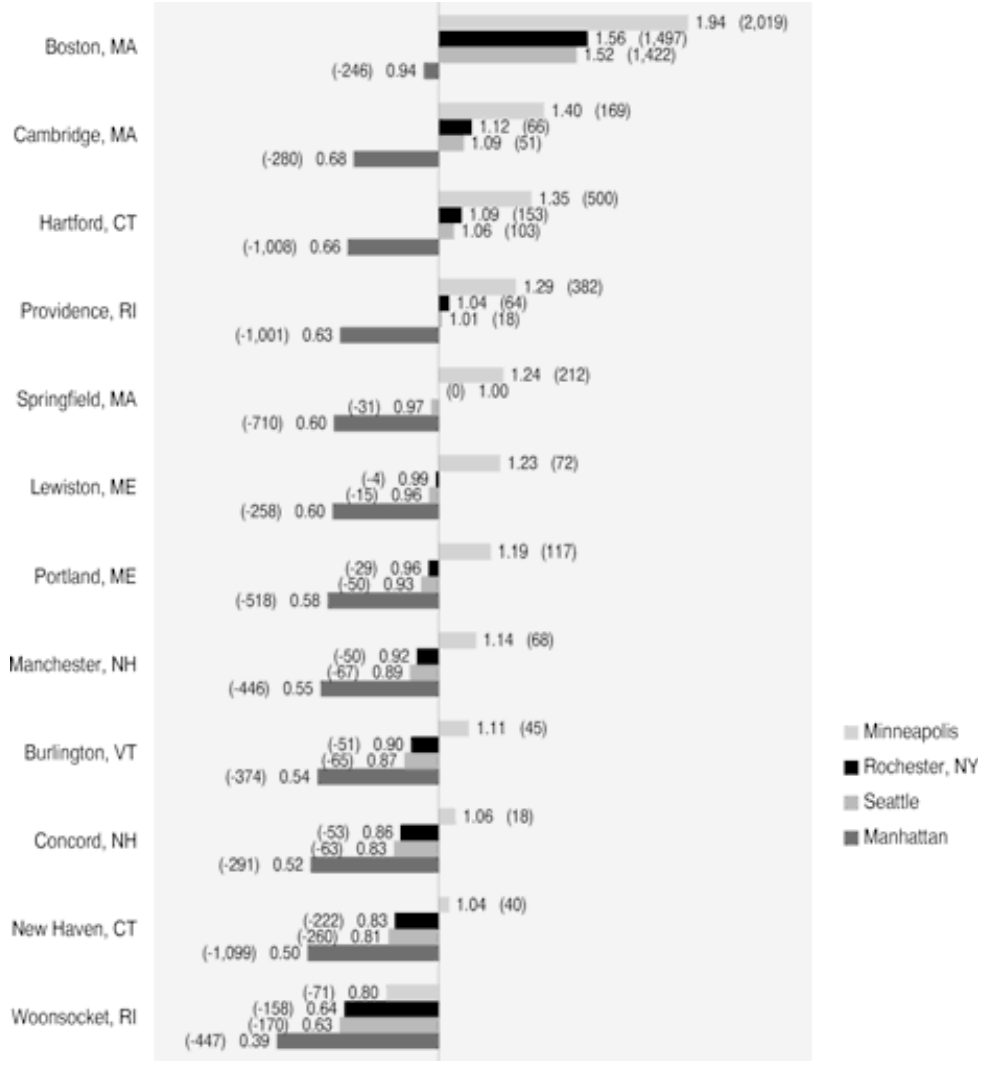


Figure 2.10. Hospital-Based Registered Nurses Allocated to Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1993)

The figure gives the ratio of hospital-based registered nurses in selected hospital service areas in the New England States to other areas. The number of nurses above (+) or below (-) the number of nurses predicted by the experience in the benchmark area is in parentheses. For example, the number of registered nurses per 1,000 allocated to the residents of Boston was 1.94 times higher than Minneapolis. If the level of registered nurses of the Minneapolis benchmark in 1993 had been attained for the residents of Boston, 2,019 fewer nurses would have been needed. If the Manhattan benchmark had applied, 246 more nurses would have been needed.

Benchmarking: Total Hospital Expenditures

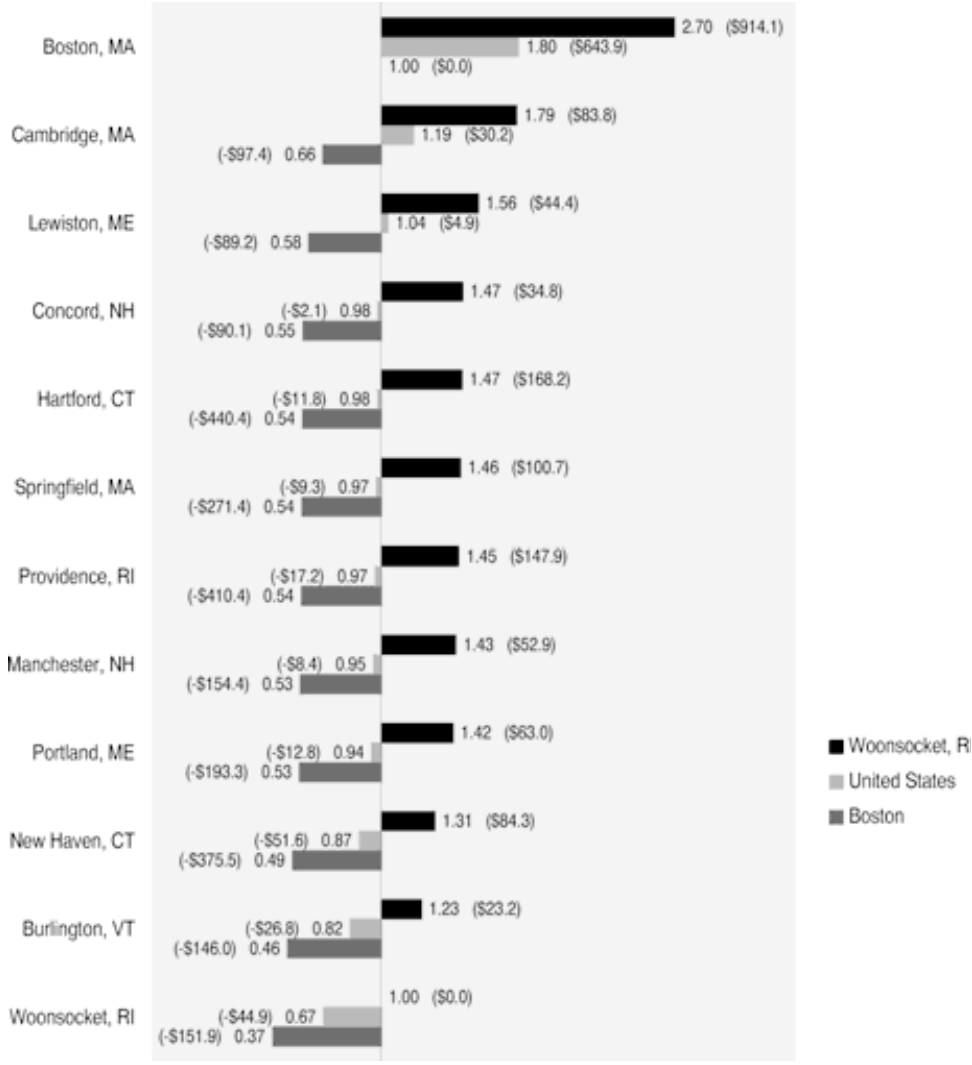


Figure 2.11 Price Adjusted Total Hospital Expenditure per capita in Selected Hospital Service Areas in the New England States Compared to Highest and Lowest Ranked Selected Areas (1993)

The figure gives the ratio of total hospital expenditures in selected hospital service areas to the lowest and the highest ranked areas. It also compares each selected area to the U.S. average. The number of dollars above (+) or below (-) the number predicted by the experience in the benchmark area for 1993 is in parentheses. For example, price adjusted expenditures per 1,000 allocated to the residents of Boston was 2.7 times higher than Woonsocket, Rhode Island. If the level of expenditure of the Woonsocket benchmark in 1993 had been attained for the residents of Boston, $914.1 million less would have been spent.

Benchmarking: Total Hospital Expenditures

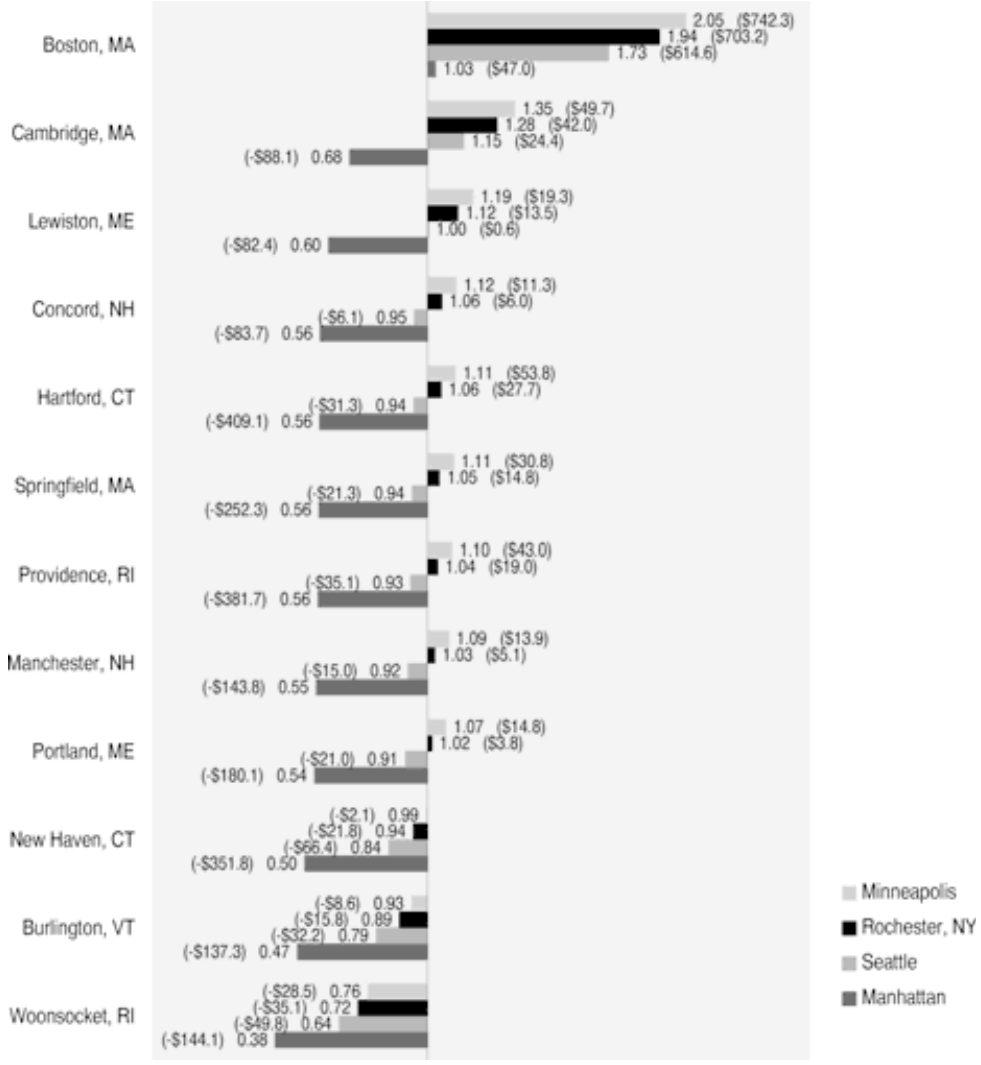


Figure 2.12 Price Adjusted Total Hospital Expenditures per capita in Selected Hospital Services Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1993)

The figure gives the ratio of total hospital expenditures in selected hospital service areas in the New England States to other areas. The amount of expenditures above (+) or below (-) the amount of expenditures predicted by the experience in the benchmark area is in parentheses. For example, the price adjusted expenditures per 1,000 allocated to the residents of Boston were 2.05 times higher than Minneapolis. If the level of expenditure of the Minneapolis benchmark in 1993 had been attained for the residents of Boston, $742.3 million less would have been spent. If the Manhattan benchmark had applied, $47 million less would have been spent.

TABLE 2 Health care services utilization is expressed in rates per thousand residents. Rates are adjusted for differences in age, sex, and race composition of areas' populations. The rates represent the health care utilization of persons living in the specified area, regardless of where services were obtained. Reimbursements are expressed in rates per person, and are adjusted for regional differentials in prices. Estimates of allocated hospital employees and registered nurses are expressed as full-time equivalents (FTE).

Numbers appearing in parentheses are based on fewer than 3,500 person-years of experience.

See Part Nine of the national volume of the Dartmouth Atlas of Health Care for details.

TABLE 2

Acute Care Hospital Resources Allocated to Hospital Service Areas

Hospital Service Area	Resident Population	Acute Care Beds per 1000	Hospital Employees per 1000	Hospital-based Registered Nurses per 1000	Price-Adjusted Expenditures per capita
Connecticut					
Bridgeport	299,628	2.7	10.8	2.2	753
Bristol	76,599	2.6	15.7	3.0	889
Danbury	159,854	2.7	12.6	2.7	811
Derby	89,022	2.4	11.0	2.3	724
Greenwich	58,506	2.6	16.2	4.2	998
Hartford	511,789	3.0	15.0	3.8	1,029
Manchester	85,015	2.4	11.8	2.6	806
Meriden	100,279	1.7	14.9	2.8	829
Middletown	158,987	1.7	9.9	2.2	686
Milford	49,940	2.5	11.8	2.7	796
New Britain	109,594	2.7	15.1	3.3	936
New Haven	386,607	2.4	12.9	2.9	918
New London	154,948	2.4	10.9	2.2	806
New Milford	43,274	2.7	11.8	2.7	908
Norwalk	145,346	2.5	13.2	2.9	874
Norwich	70,355	2.6	13.9	3.7	945
Putnam	67,281	2.6	12.1	3.1	935
Rockville	52,009	2.8	13.4	3.1	855
Sharon	38,423	3.1	14.0	3.6	955
Southington	38,591	2.5	12.0	2.2	790
Stafford Springs	72,350	2.3	10.9	2.3	716
Stamford	126,055	3.2	13.7	3.3	921
Torrington	56,737	2.8	14.0	3.5	955
Waterbury	255,132	2.6	12.8	3.0	866
Willimantic	75,325	2.6	9.6	2.0	816
Winsted	18,623	3.4	13.7	3.0	866
Maine					
Augusta	68,143	2.6	12.0	2.8	864
Bangor	121,418	2.7	14.3	4.2	1,017
Bar Harbor	9,698	3.5	16.3	4.2	1,200
Belfast	18,596	3.1	15.4	4.1	991
Biddeford	61,604	2.8	12.4	3.3	888
Blue Hill	8,522	3.5	17.5	5.3	1,324
Boothbay Harbor	5,640	3.9	17.1	4.3	1,217
Bridgton	14,858	3.4	16.7	3.7	1,067
Brunswick	69,003	2.8	12.0	3.2	752
Calais	14,450	4.6	18.1	4.3	1,321
Caribou	27,267	3.1	14.3	3.6	971
Damariscotta	9,152	2.8	17.4	4.6	1,159
Dover-Foxcroft	21,483	3.1	14.4	3.7	957
Ellsworth	21,025	3.6	16.4	3.8	1,134
Farmington	35,630	3.0	13.6	3.2	932
Fort Kent	13,563	4.3	17.1	4.8	1,002
Greenville	3,790	4.3	18.1	3.3	1,219
Houlton	18,053	3.3	15.8	4.0	1,072
Lewiston	112,342	3.6	13.0	3.4	1,095
Lincoln	14,280	3.4	14.2	3.6	1,007
Machias	15,962	3.3	14.7	3.6	1,062
Millinocket	12,843	4.4	14.5	3.7	1,169
Norway	25,007	2.5	13.4	3.3	891
Pittsfield	17,534	3.3	14.4	3.5	1,026
Portland	215,490	2.9	14.2	3.3	992
Presque Isle	28,392	3.9	18.0	4.9	1,073
Rockland	44,103	2.4	13.7	3.2	890
Rumford	16,930	3.9	18.7	4.7	1,450
Sanford	44,589	2.5	11.7	3.2	804
Skowhegan	29,758	3.8	17.5	4.5	1,153
Waterville	64,687	3.5	15.1	4.0	1,072
York	30,504	2.9	14.0	4.0	1,127
Massachusetts					
Arlington	73,533	2.5	13.7	3.3	963
Athol	23,913	3.4	16.6	3.3	1,046
Attleboro	102,110	3.0	12.6	2.7	820
Ayer	57,962	2.0	10.5	2.5	729
Beverly	111,015	2.5	12.9	3.2	880
Boston	768,694	3.7	24.9	5.4	1,889
Brockton	239,486	3.4	14.9	3.3	1,029
Burlington	23,093	1.8	12.1	2.8	791
Cambridge	152,358	3.1	18.4	3.9	1,250
Clinton	19,287	2.8	12.9	3.3	789
Concord	93,269	2.3	12.4	3.2	824
Everett	35,493	3.6	21.6	4.5	1,522
Fall River	161,355	3.1	13.3	2.8	917
Falmouth	66,543	2.9	15.3	3.6	1,240
Fitchburg	55,412	3.1	12.5	2.4	931
Gardner	50,090	3.3	12.9	3.1	822
Gloucester	36,198	3.2	16.6	3.6	1,033

Hospital Service Area	Resident Population	Acute Care Beds per 1000	Hospital Employees per 1000	Hospital-based Registered Nurses per 1000	Price-Adjusted Expenditures per capita
Great Barrington	21,360	2.8	12.0	2.5	926
Greenfield	60,801	2.5	13.2	2.8	1,052
Haverhill	77,130	2.9	11.2	2.5	791
Holyoke	67,693	3.8	13.8	2.8	991
Hyannis	121,922	2.5	14.2	3.5	1,207
Lawrence	122,521	3.2	13.2	2.9	843
Leominster	38,145	3.0	13.3	3.0	932
Lowell	259,507	3.0	13.4	2.9	955
Ludlow	18,820	2.4	11.5	2.8	845
Lynn	96,347	3.4	15.7	3.7	1,054
Malden	54,114	4.0	22.7	4.6	1,542
Marlborough	52,180	2.7	13.1	3.0	892
Medford	57,338	3.3	19.6	3.8	1,281
Melrose	78,545	3.4	17.5	4.0	1,182
Methuen	65,410	3.5	14.2	3.2	931
Milton	25,558	3.5	18.7	4.1	1,345
Nantucket	6,012	3.8	23.1	5.2	1,854
Natick	210,485	2.4	14.0	3.3	1,029
Needham	27,576	2.5	13.2	2.9	1,003
New Bedford	163,683	2.6	13.1	3.3	874
Newburyport	63,370	2.8	13.1	3.1	906
Newton	83,348	3.2	18.1	4.1	1,305
Norfolk	40,393	2.8	12.0	2.4	806
North Adams	39,439	3.3	14.8	3.7	1,031
Northampton	101,922	2.2	9.5	2.1	672
Norwood	110,164	3.5	17.0	3.9	1,200
Oak Bluffs	11,541	3.5	18.0	4.4	1,761
Palmer	20,397	3.0	17.2	3.6	1,178
Pittsfield	100,989	3.8	15.9	3.5	1,058
Plymouth	81,544	2.5	11.9	3.0	955
Quincy	67,250	3.6	17.2	3.8	1,257
Salem	118,948	3.1	17.1	3.5	1,103
Somerville	76,393	3.3	19.2	4.0	1,314
South Weymouth	215,427	2.7	14.8	3.6	1,081
Southbridge	41,352	3.1	13.5	2.6	905
Springfield	312,914	2.9	13.7	3.5	1,022
Stoneham	22,147	3.0	19.9	4.0	1,269
Stoughton	26,777	4.4	17.5	4.0	1,228
Taunton	95,195	3.1	12.8	2.5	966
Waltham	68,092	3.6	16.0	3.7	1,190
Ware	31,070	2.5	14.0	3.5	911
Wareham	25,767	2.6	14.2	3.1	1,040
Webster	25,736	2.4	12.5	2.9	807
Westfield	53,368	2.8	11.0	2.5	775
Winchester	108,572	2.6	15.3	3.6	1,062
Winthrop	18,907	4.2	21.4	4.4	1,577
Worcester	405,867	2.5	13.5	3.3	920

Hospital Service Area	Resident Population	Acute Care Beds per 1000	Hospital Employees per 1000	Hospital-based Registered Nurses per 1000	Price-Adjusted Expenditures per capita
New Hampshire					
Berlin	17,855	4.8	17.2	4.7	1,494
Claremont	22,069	3.3	14.8	3.6	1,226
Colebrook	6,633	4.7	17.7	4.1	1,035
Concord	105,055	2.4	11.2	3.0	1,032
Derry	47,907	1.9	8.1	2.3	671
Dover	74,625	2.0	10.6	2.7	746
Exeter	79,010	2.0	9.4	2.7	715
Franklin	23,078	3.0	13.4	3.6	1,008
Keene	55,756	2.9	10.8	2.8	1,153
Laconia	43,292	2.8	15.0	3.9	1,141
Lancaster	13,428	4.1	17.3	4.7	1,361
Lebanon	61,167	2.9	15.9	4.3	1,689
Littleton	14,253	3.2	11.6	3.5	1,066
Manchester	174,345	2.5	12.0	3.2	1,004
Nashua	163,513	2.7	12.2	3.1	823
New London	22,944	2.8	15.3	3.5	1,273
North Conway	14,058	3.0	13.9	3.5	1,345
Peterborough	33,448	2.7	9.5	2.7	732
Plymouth	17,010	3.4	13.0	3.7	1,224
Portsmouth	35,135	2.4	12.3	3.6	715
Rochester	42,504	2.4	10.3	2.7	647
Wolfeboro	18,800	3.2	13.7	3.6	1,104
Woodsville	13,878	4.1	15.7	4.6	1,365
Rhode Island					
Newport	69,543	3.0	11.0	2.5	780
Pawtucket	89,835	2.9	13.5	3.2	887
Providence	469,499	2.8	15.4	3.6	1,015
Wakefield	56,533	2.3	11.6	3.0	750
Warwick	187,117	2.8	13.2	3.2	857
Westerly	49,390	2.8	11.2	2.3	848
Woonsocket	127,734	2.5	10.0	2.2	700
Vermont					
Bennington	48,768	3.2	13.2	3.0	939
Berlin	61,594	2.6	11.8	3.3	881
Brattleboro	29,089	3.3	12.0	2.9	1,050
Burlington	142,306	2.6	11.5	3.1	863
Middlebury	27,976	2.6	12.5	3.0	922
Morrisville	22,493	2.9	14.0	4.0	1,009
Newport	23,298	2.5	18.2	3.2	1,127
Randolph	17,561	3.1	14.6	3.4	1,245
Rutland	64,801	3.0	12.2	3.5	1,039
Springfield	29,187	3.4	14.9	4.3	1,343
St Albans	38,242	3.2	14.2	3.8	950
St Johnsbury	24,303	4.2	14.2	3.7	1,131
Townshend	4,115	3.9	11.8	2.4	828
Windsor	8,165	2.4	11.4	2.6	914

Part Three

The Medicare Program in the New England States

The Medicare Program in the New England States

Most Americans over the age of 65 receive their medical care from "traditional" Medicare. That is, their care is obtained from providers who charge on a fee-for-service basis, either as independent practitioners or as members of health maintenance organizations that are not capitated. In 1992-93, over 95% of Medicare outlays for people over 65 were reimbursed on a fee-for-service basis. There were large differences in these reimbursements between hospital service areas in the New England States: total program outlays varied by a factor of more than 2.0; reimbursements for professional and laboratory services by a factor of almost 2.5; and reimbursements for outpatient services by a factor of more than 3.0.

Many policy experts have recommended greater enrollment in capitated managed care among the Medicare population as a means of both cost containment and improvement in the quality of care. The inequalities between areas in capitation payments, however, raise a serious challenge to implementing this strategy.

The basis for the federal capitation payment for managed care coverage of Medicare enrollees is the Average Adjusted Per Capita Cost, or AAPCC. The amount is determined by the fee-for-service payments in the enrollee's county of residence. Since there are large differences in reimbursements among hospital service areas, the amount reimbursed varies strikingly from one region to another. These disparities have stimulated a growing debate about geographic equity.

Most of the attention has focused on the differences between states or large sections of the country. For example, the AAPCC for 1996 for residents of the Minneapolis hospital service area was $4,599. Residents of the Miami hospital service area received $8,245, which is almost 80% more. Yet because the federal contribution is based on historical reimbursements within the county where the enrollee lives, there are also striking variations within states. In 1996, the AAPCC in Massachusetts varied more than 58%, from a low of $4,529 in Greenfield and $4,631 in Northampton, to $7,084 in Boston and $7,195 in Winthrop.

The differences in the AAPPC payment may reflect differences in prices that exist between regions. To remove price as a factor in explaining the differences, the AAPCC has been price adjusted, according to the method described in Part Nine of the national volume. These adjustments, in some cases, make a substantial difference. Because prices are slightly higher in Miami than in Minneapolis, the price adjusted AAPCC in Miami is about 72% higher than in Minneapolis ($7,655 compared to $4,458, respectively). The benchmarks for the AAPCC in Part Three include adjusted as well as unadjusted rates. Table 3 contains both.

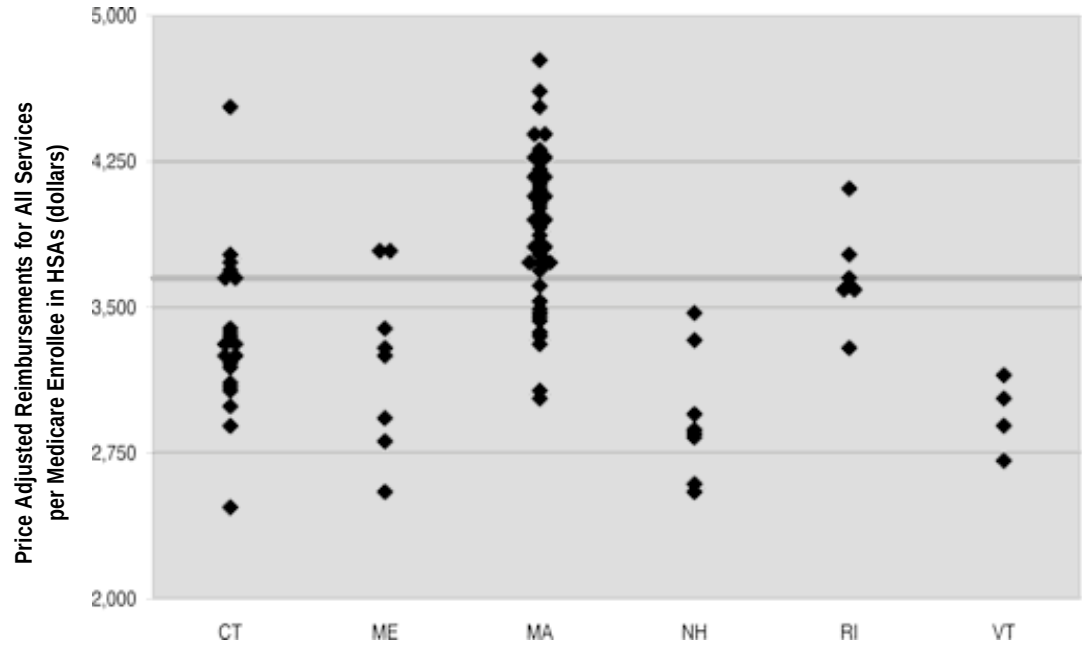
Note on Methods

Estimates for reimbursements are based on a 5% sample of the Medicare population as recorded in the Continuous Medicare History File. The data are for 1992-93, and the rates are an annualized average for the two year period. Fee-for-service reimbursements have been price adjusted to take into account differences in the cost of living among hospital service areas. A description of the methods used to make these price adjustments is in Part Nine of the national volume of the Dartmouth Atlas of Health Care.

The estimates for the AAPCC in each hospital service area have been made as follows. When a hospital service area was located entirely within the boundaries of a county, the AAPCC is for that county. When a hospital service area overlaps two or more counties, the estimate is a weighted average, based on the proportion of the hospital service area's Medicare enrollees who resided in each county in 1993. Price adjustments to the AAPCC were made according to the method described in Part Nine of the national volume of the Atlas. The population used to estimate the dollars above or below the amount predicted by the benchmark (figures 3.10-3.13) is the 1993 enrollee population. The estimates therefore do not include population gain or loss that may have occurred since 1993.

Medicare Reimbursements for Traditional (Noncapitated) Medicare

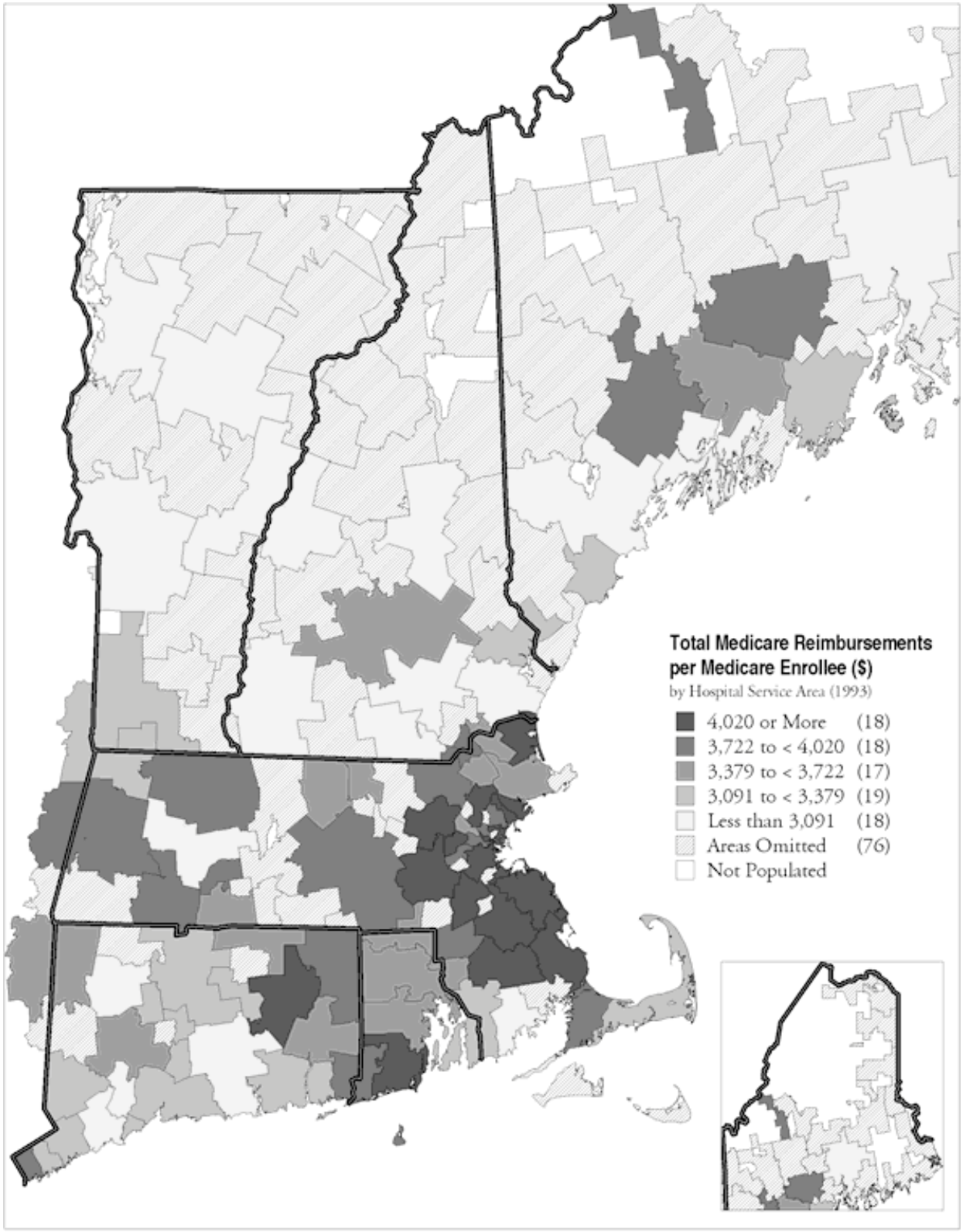
The majority of hospital service areas in the New England States were below the United States average total Medicare reimbursement per enrollee of $3,650. In Massachusetts, however, there were some areas with much higher reimbursement rates, including Boston ($4,764); Somerville ($4,604); Malden ($4,536); and South Weymouth ($4,396). The hospital service area in Providence, Rhode Island ($3,588) was near the national average; New Haven, Connecticut ($3,113); Burlington, Vermont ($3,028); and Portland, Maine ($2,937); and Manchester, New Hampshire ($2867) were below the U.S. average rate.



The New England States. The gray horizontal line represents the United States average.

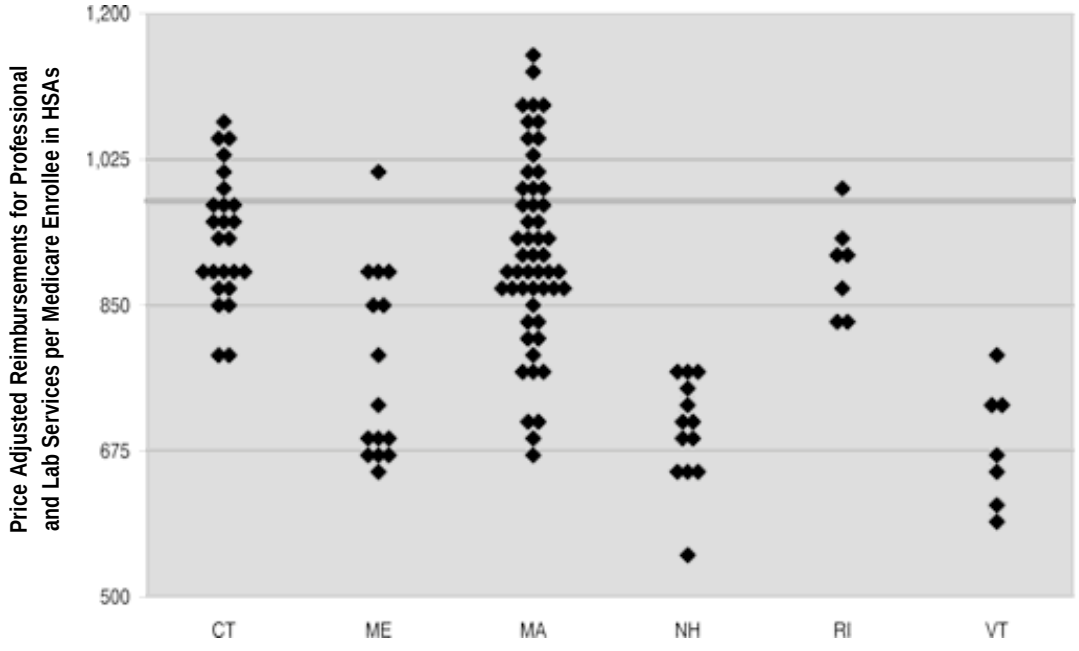
Figure 3.1. Price Adjusted Reimbursements for Traditional (Noncapitated) Medicare in Hospital Service Areas in the New England States (1992-93)

Per enrollee reimbursements by the Medicare program for all services varied by a factor of more than 1.8, from less than $2,500 to more than $4,700. Each point represents one hospital service area.


Total Medicare Reimbursements
per Medicare Enrollee ($)
by Hospital Service Area (1993)
4,020 or More (18)
3,722 to < 4,020 (18)
3,379 to < 3,722 (17)
3,091 to < 3,379 (19)
Less than 3,091 (18)
Areas Omitted (76)
Not Populated

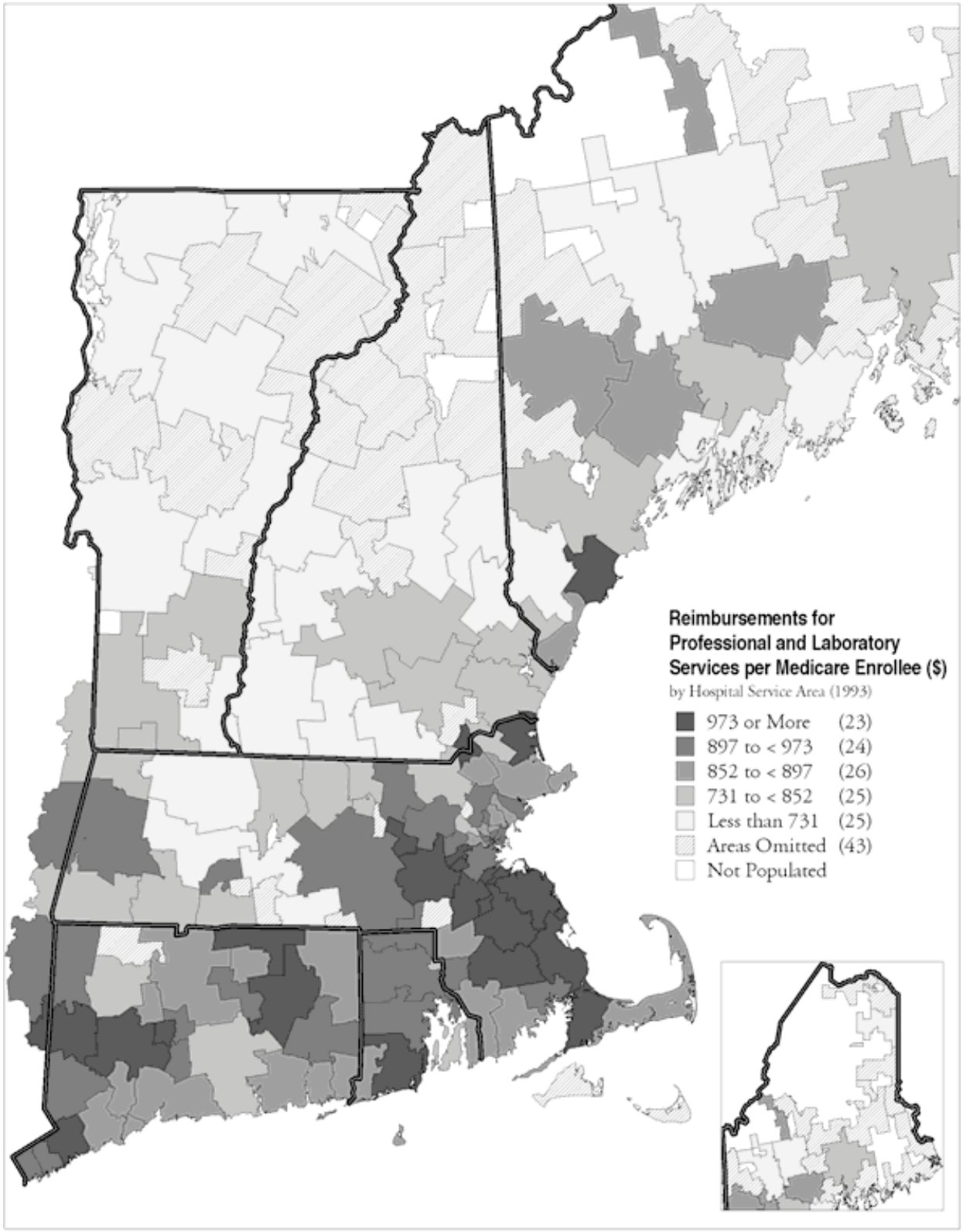
Medicare Reimbursements for Professional and Laboratory Services

Professional services reimbursements include payments to surgeons and medical doctors for activities such as office consultations, vaccinations, and major surgery. Common laboratory services include biopsy evaluations and blood tests. Most hospital service areas in the New England States had rates of reimbursements for these services which were below the United States average; no large New Hampshire or Vermont hospital service areas had reimbursements of more than about 80% of the United States average. Reimbursements were higher than the national average in Newton, Massachusetts ($1,094); Norwood, Massachusetts ($1,066); and Willimantic, Connecticut ($1,043). Rates were lower than the national average in Manchester, New Hampshire ($760); Burlington, Vermont ($727); and Northampton, Massachusetts ($664).



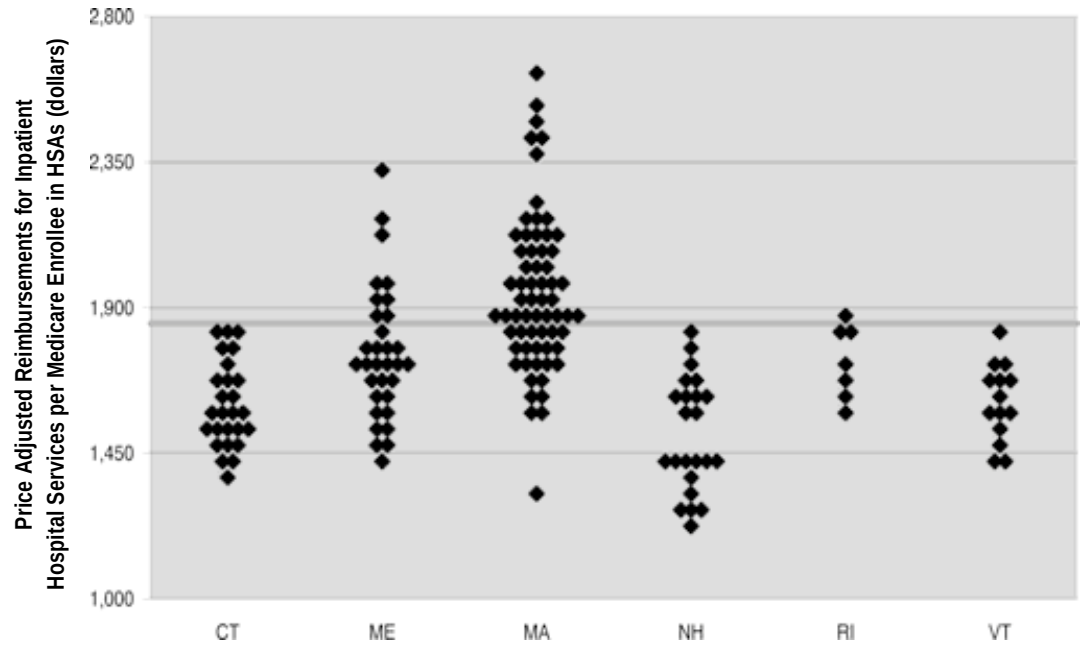
The New England States. The gray horizontal line represents the United States average.

Figure 3.2. Price Adjusted Part B Medicare Reimbursements for Professional and Laboratory Services In Hospital Service Areas in the New England States (1992-93)
Reimbursements for professional and laboratory services varied by a factor of 2, from less than $550 to more than $1,100. Each point represents one hospital service area.


Reimbursements for
Professional and Laboratory
Services per Medicare Enrollee ($)
by Hospital Service Area (1993)
973 or More (23)
897 to < 973 (24)
852 to < 897 (26)
731 to < 852 (25)
Less than 731 (25)
Areas Omitted (43)
Not Populated

Medicare Reimbursements for Inpatient Hospital Services

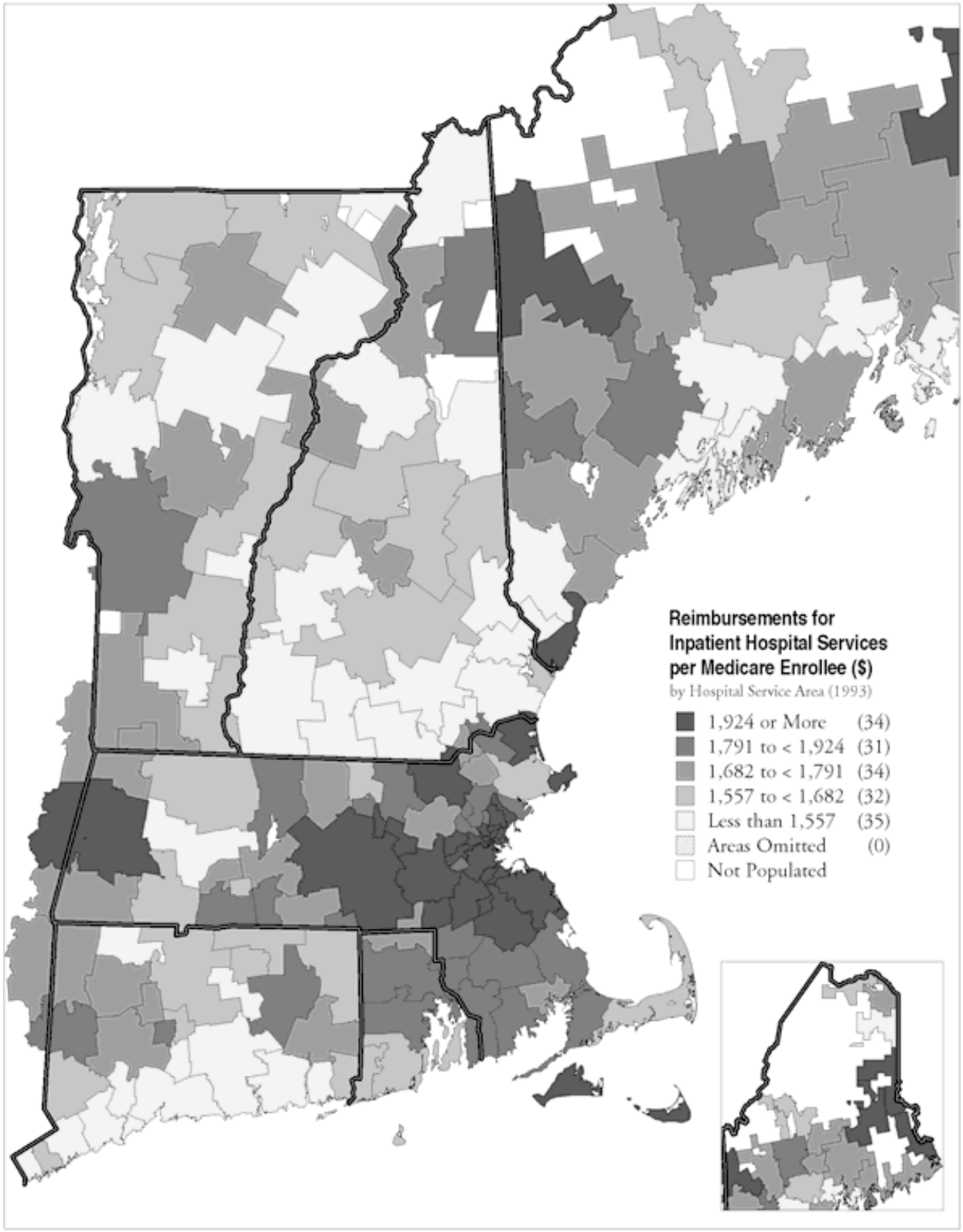
Virtually all hospital service areas in four of the six New England States had per enrollee reimbursements for inpatient acute hospital care that were at or below the 1992-93 United States average of $1,852. Massachusetts and Maine were the exceptions; each had hospital service areas with per enrollee inpatient reimbursement rates of more than $2,000. Of the region's large cities, Boston, at $2,428, was about 21% above the national average; the hospital service areas in Manchester, New Hampshire ($1,294); New Haven, Connecticut ($1,545); Burlington, Vermont ($1,658); Portland, Maine ($1,716); and Providence, Rhode Island ($1,819) were all lower.



The New England States. The gray horizontal line represents the United States average.

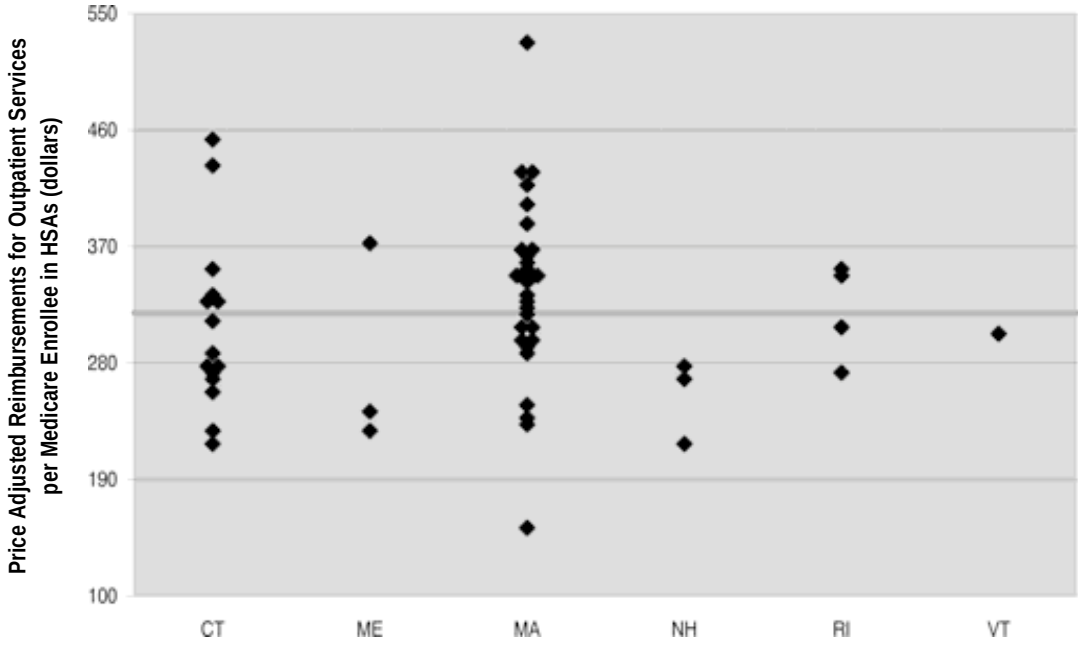
Figure 3.3. Price Adjusted Medicare Reimbursements for Inpatient Hospital Services per Medicare Enrollee in Hospital Service Areas in the New England States (1992-93)

Per enrollee Medicare reimbursements for inpatient acute care hospital services varied by a factor of more than 2, from about $1,200 to more than $2,600. Each point represents one hospital service area.


Reimbursements for
Inpatient Hospital Services
per Medicare Enrollee ($)
by Hospital Service Area (1993)
1,924 or More (34)
1,791 to < 1,924 (31)
1,682 to < 1,791 (34)
1,557 to < 1,682 (32)
Less than 1,557 (35)
Areas Omitted (0)
Not Populated

Medicare Reimbursements for Outpatient Services

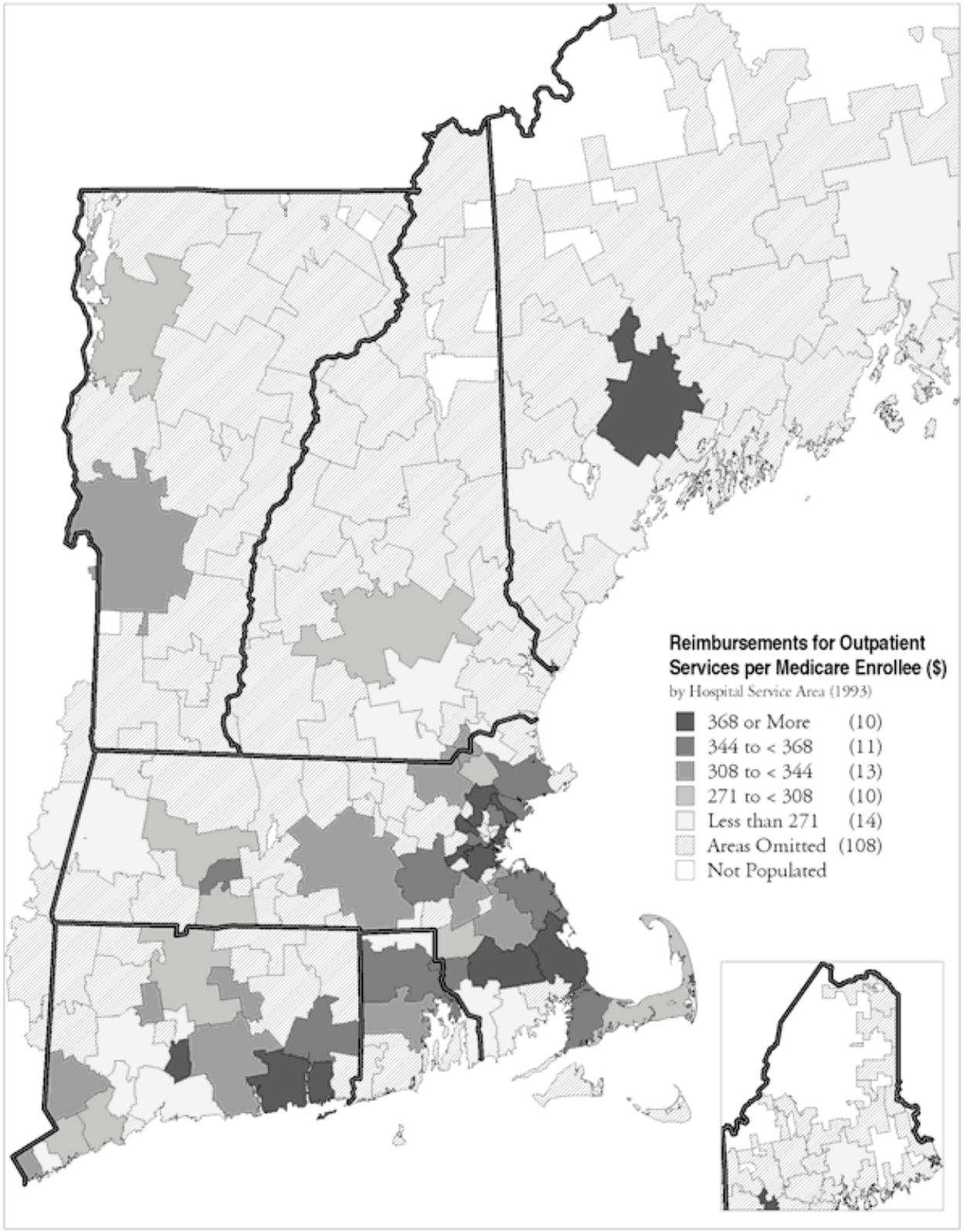
Among the larger hospital service areas in the New England States, there was a large range of variation in price adjusted Medicare reimbursements for outpatient services. Per enrollee rates ranged from $151 in New Bedford, Massachusetts, to $527 in Boston; and among Connecticut hospital service areas, from $216 per enrollee in Stamford to $452 in New London. Boston's hospital service area had per enrollee reimbursements more than twice as high as the Manchester, New Hampshire ($216), and Portland, Maine ($228), hospital service areas. The hospital service areas in New Haven, Connecticut ($268) and Burlington, Vermont ($304) were below the U.S. average of $319.



The New England States. The gray horizontal line represents the United States average.

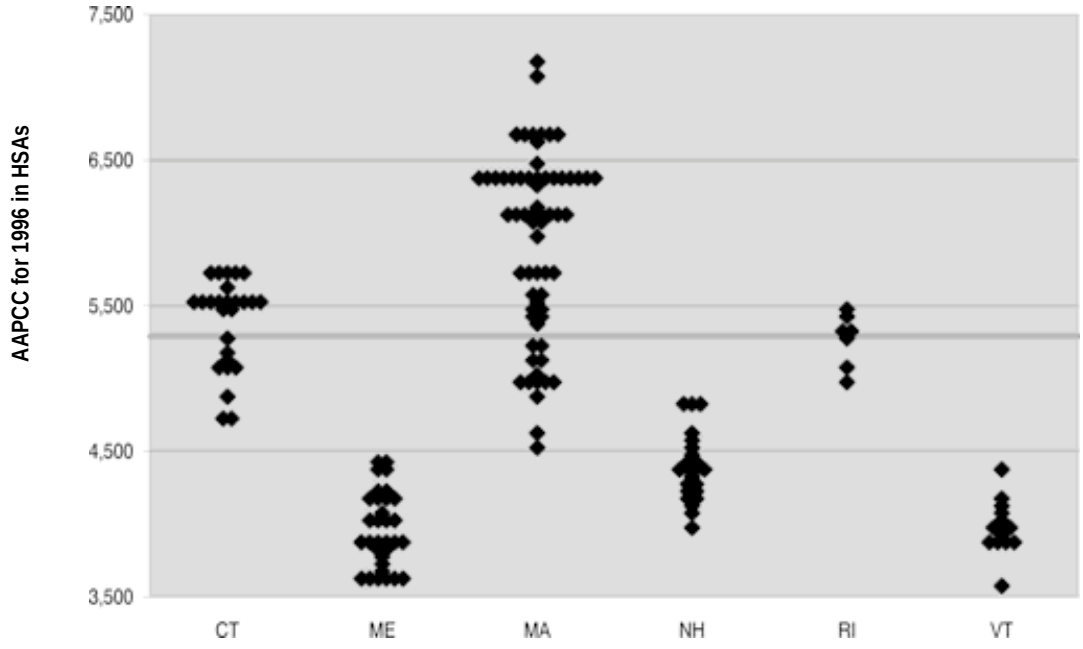
Figure 3.4. Price Adjusted Medicare Reimbursements for Outpatient Services In Hospital Service Areas in the New England States (1992-93)

Price adjusted Medicare reimbursements for outpatient services varied by a factor of more than 3, from $151 per enrollee to more than $525. Each point represents one hospital service area. (Sample size requirements resulted in the omission of a large number of areas from the distribution graph.)


Reimbursements for Outpatient Services per Medicare Enrollee ($)
by Hospital Service Area (1993)
368 or More (10)
344 to < 368 (11)
308 to < 344 (13)
271 to < 308 (10)
Less than 271 (14)
Areas Omitted (108)
Not Populated

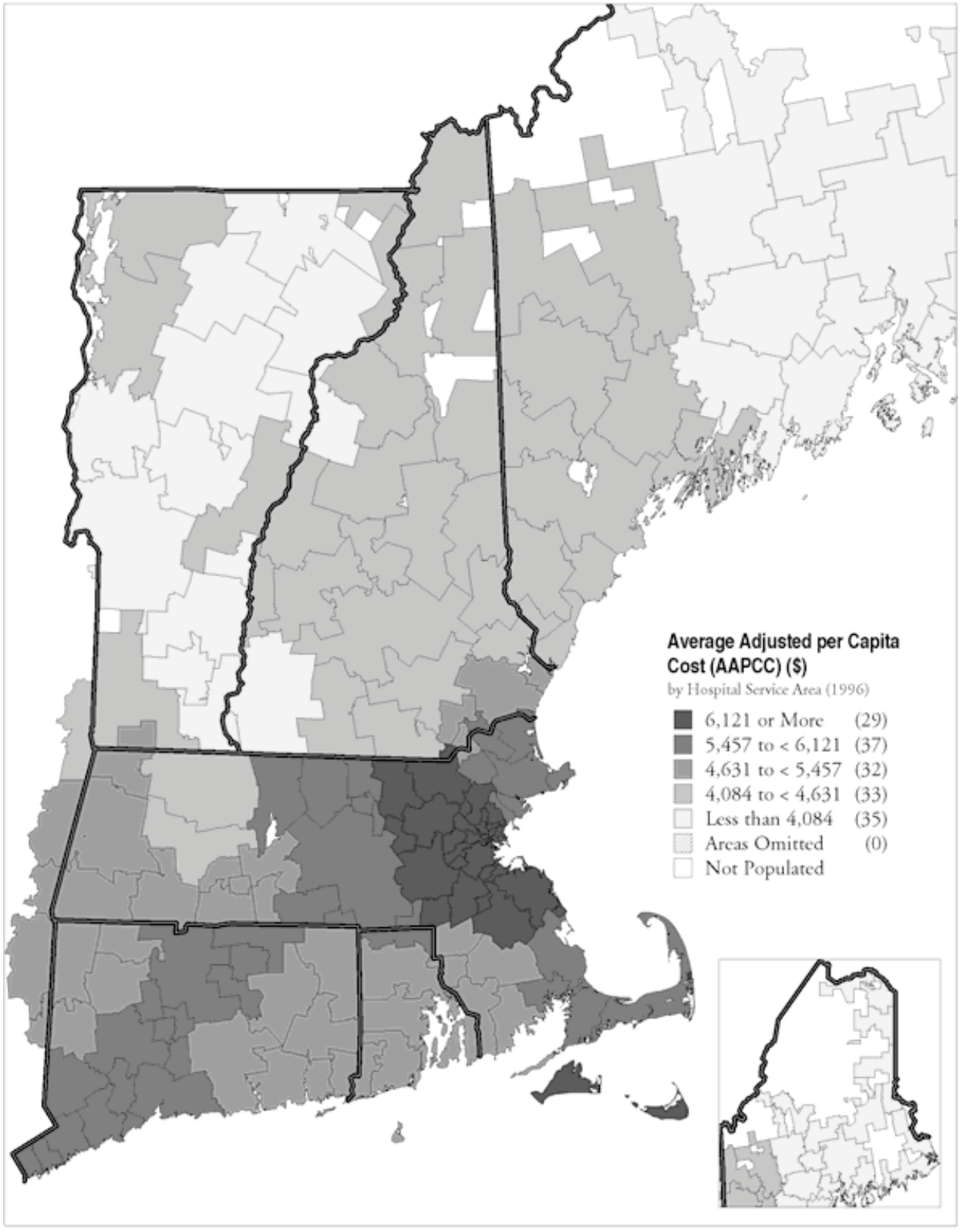
Average Adjusted Per Capita Costs

The Adjusted Average per Capita Cost (AAPCC) ranged from less than $4,500 to more than $7,000 in Massachusetts; hospital service areas in the other New England States had narrower ranges of variation, but were generally well below the United States average of $5,291. The AAPCC in Boston ($7,084) was among the highest in the region - 28% higher than New Haven, Connecticut ($5,542); 35% higher than Providence, Rhode Island ($5,266); 53% higher than Manchester, New Hampshire ($4,615); 60% higher than Portland, Maine ($4,429); and 63% higher than Burlington, Vermont ($4,350). The AAPCC in Figure 3.5 has not been adjusted for price differences among hospital service areas.



The New England States. The gray horizontal line represents the United States average.

Figure 3.5. The Adjusted Average per Capita Cost in Hospital Service Areas in the New England States (1996)
Adjusted Average per Capita Costs varied by a factor of more than 1.5, from less than $4,500 per enrollee to more than $7,000. Each point represents one hospital service area.

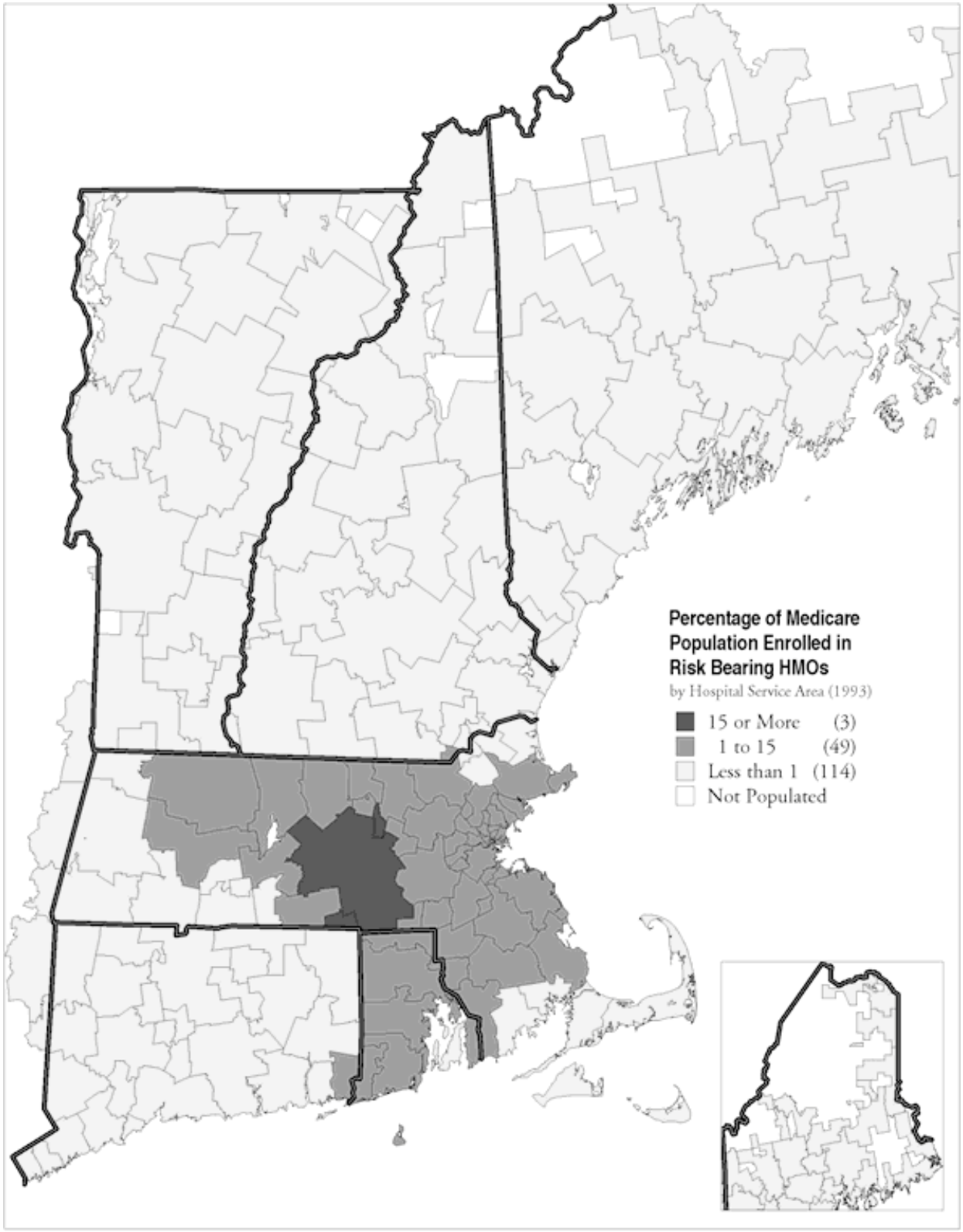

Average Adjusted per Capita Cost (AAPCC) ($)
by Hospital Service Area (1996)
6,121 or More (29)
5,457 to < 6,121 (37)
4,631 to < 5,457 (32)
4,084 to < 4,631 (33)
Less than 4,084 (35)
Areas Omitted (0)
Not Populated

Medicare Enrollment in Capitated Managed Care Plans

Since the early 1970s, Medicare beneficiaries have been offered the option of joining risk bearing, or capitated, health maintenance organizations. Under the capitation plan, the federal government pays health maintenance organizations a fixed annual amount per enrollee. In exchange, the health maintenance organization must provide all required services. If the total costs of care exceed the amount the government pays, then the health maintenance organization must absorb the loss; if they are less, then the health maintenance organization may retain the difference.

In 1993, about 1.6 million, or 5.2%, of all Medicare enrollees were covered by risk bearing health maintenance organizations, but enrollment was geographically very uneven across the United States. Enrollment in managed care also varied in the New England States, but no hospital service area had more than 25% Medicare enrollment in managed care, and most had far less.

In the majority of hospital service areas in the New England States, less than 1% of Medicare enrollees were covered by managed care plans. Worcester, Massachusetts, had 23.7% enrollment in managed care among its Medicare residents; but Boston had only 3.4% enrollment, and Springfield had less than 1%. Providence, Rhode Island, had 5.2% enrollment; New Haven, Connecticut, had 1%; Manchester, New Hampshire, had .09%; Burlington, Vermont, had .08%; and Portland, Maine, had .07%.


Percentage of Medicare Population Enrolled in Risk Bearing HMOs
by Hospital Service Area (1993)
15 or More (3)
1 to 15 (49)
Less than 1 (114)
Not Populated

The Boundaries of Counties, Hospital Service Areas, and the AAPCC

As natural markets, hospital service areas commonly cross city limits and county boundaries, and sometimes even state lines. Some hospital service areas have component ZIP Codes in several different counties, and others are contained wholly within one county. In all six of the New England States, there are examples of hospital service areas overlapping county boundaries.

Since the AAPCC is calculated on the basis of county-level utilization experience, its value represents the weighted average of costs of variable numbers of health care markets. For counties containing several hospital service areas, the AAPCC's value may not be closely related to the actual costs of providing care in a given area. For example, in Massachusetts, the neighboring hospital service areas of Medford, Arlington, Malden and Somerville are all in Middlesex County, and therefore they have the same AAPCC. Yet Medicare reimbursements in these markets were quite different: in 1992-93, they were $4,085 and $4,139 per enrollee in Medford and Arlington, respectively; and $5,392 and $5,742 in the Malden and Somerville hospital service areas. Since the actual cost of care for residents in Medford is below the value of the AAPCC, managed care organizations might have a strong incentive to target this community, thus increasing Medicare reimbursements there toward the county average. If health maintenance organizations avoided communities like Somerville (where costs exceed the AAPCC), the net effect would be an accelerated increase in overall Medicare costs.

Map 3.7, at right, shows the boundaries of Middlesex County, Massachusetts, and its constituent hospital service areas. Note that some hospital service areas cross county lines, so the AAPCC for these hospital service areas is a weighted average of the AAPCC for the constituent counties.

County and Hospital Service Area Boundaries, Middlesex County, Massachusetts.

Benchmarking: Total Medicare Reimbursements

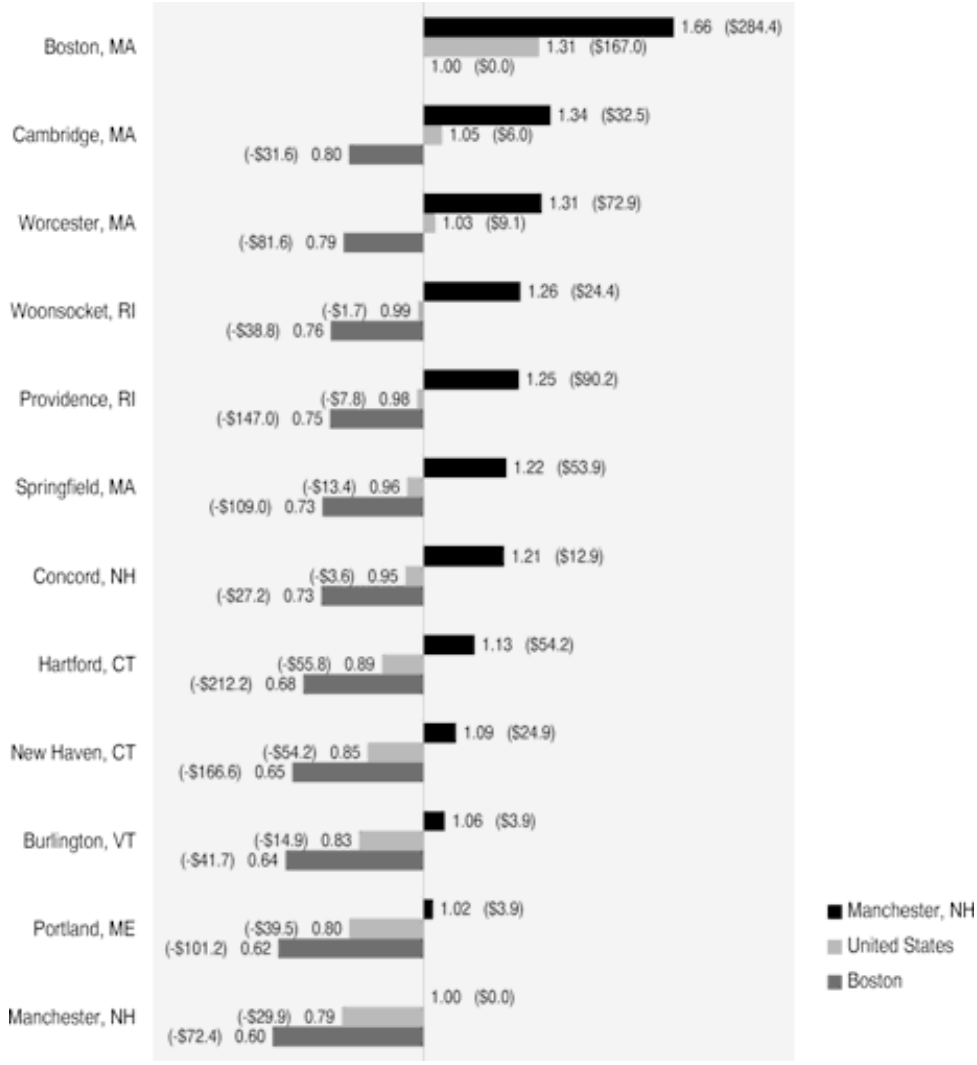


Figure 3.6. Price Adjusted Total Reimbursements per Medicare Enrollee in Selected Hospital Service Areas in the New England States Compared to Highest and Lowest Selected Areas (1992-93)

The figure gives the ratios of total Medicare reimbursements per enrollee in selected areas to the highest and lowest ranked areas. It also compares each area to the U.S. average. The number of dollars above (+) or below (-) the level of expenditures predicted by the experience in the benchmark areas for 1992-93 are in parentheses. For example, price adjusted total Medicare expenditures per enrollee in Boston were 1.66 times greater than in Manchester, New Hampshire; if the expenditure pattern for Manchester in 1992-93 had obtained in Boston, $284.4 million dollars less would have been spent on Medicare enrollees in Boston.

Benchmarking: Total Medicare Reimbursements

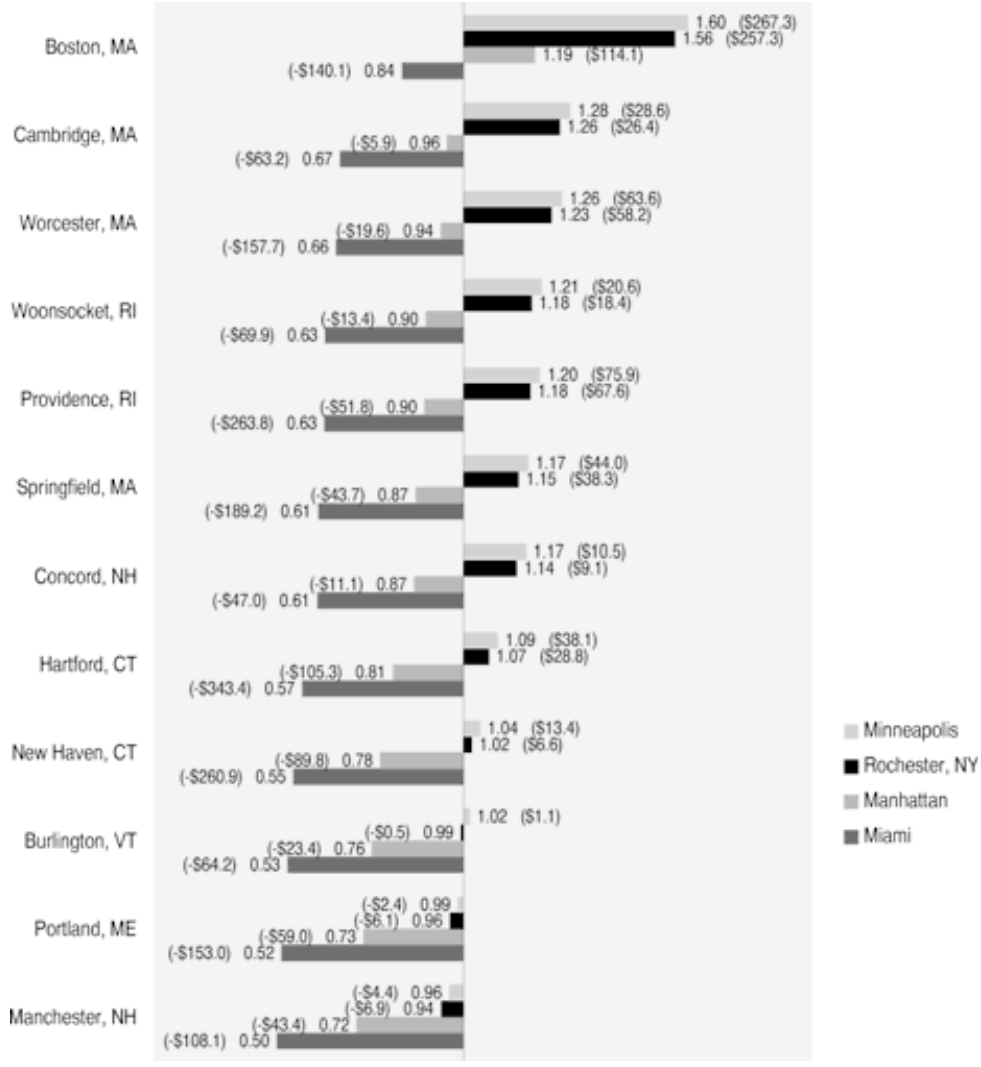


Figure 3.7. Price Adjusted Total Reimbursements per Medicare Enrollee in Selected Hospital Services Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1992-93)

The figure gives the ratios of total reimbursements in selected hospital service areas in the New England States to other areas. The numbers of dollars above (+) or below (-) the level of reimbursements predicted by the experience in the benchmark areas are in parentheses. For example, price adjusted total reimbursements per Medicare enrollee in Boston were 1.60 times greater than in Minneapolis. If the level of expenditures in Minneapolis in 1992-93 had been attained in Boston, $267.3 million less would have been spent on Boston residents. If the level of reimbursements in Miami had obtained in Boston, $140.1 million more would have been spent on Boston residents.

Benchmarking: Reimbursements for Professional and Laboratory Services

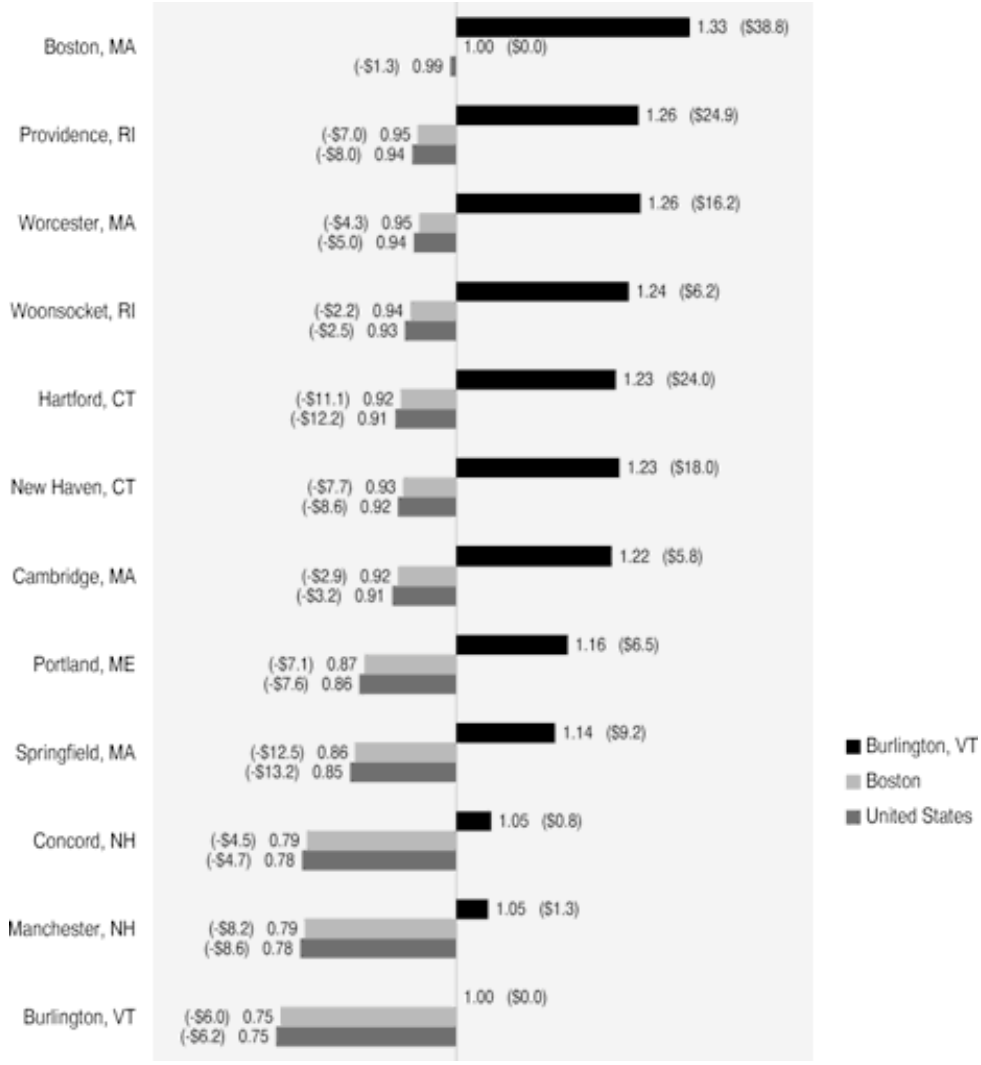


Figure 3.8. Price Adjusted Total Reimbursements for Professional and Laboratory Services per Medicare Enrollee in Selected Hospital Services Areas in the New England States Compared to Highest and Lowest Ranked Areas (1992-93)

The figure gives the ratios of reimbursements for professional and laboratory services in selected areas to the highest and lowest ranked areas. It also compares each area to the U.S. average. The numbers of dollars above (+) or below (-) the amount of reimbursements for professional and laboratory services predicted by the experience in the benchmark areas for 1992-93 are in parentheses. For example, price adjusted expenditures per enrollee in Boston were 1.33 times greater than in Burlington, Vermont; if the level of expenditures in Burlington in 1992-93 had obtained in Boston, $38.8 million less would have been spent for Boston residents.

Benchmarking: Reimbursements for Professional and Laboratory Services

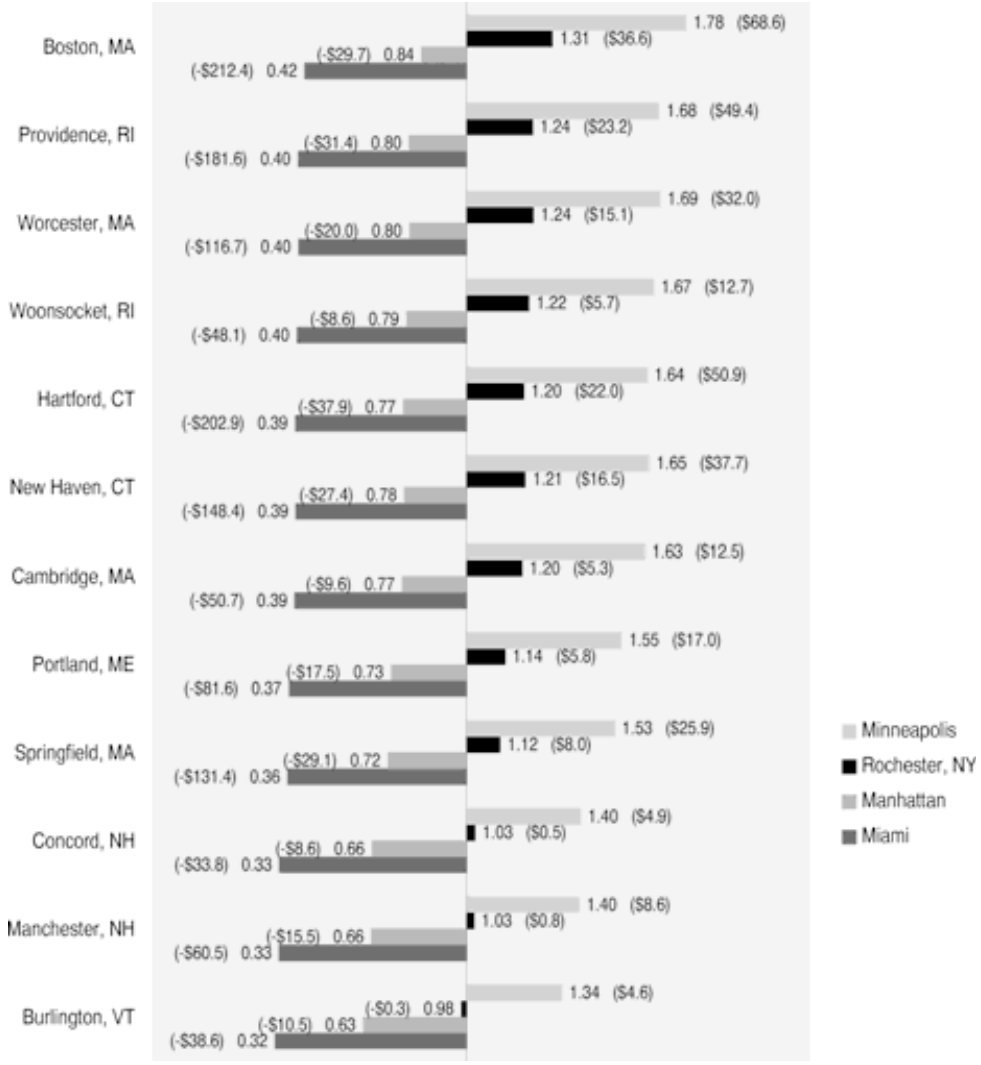


Figure 3.9. Price Adjusted Total Reimbursements for Professional and Laboratory Services per Medicare Enrollee in Selected Hospital Service Areas in the New England States Compared to the Selected Hospital Service Areas Elsewhere in the U.S. (1992-93)

The figure gives the ratio of total reimbursements for professional and laboratory services per Medicare enrollee in selected areas to the highest and lowest ranked areas. It also compares each area to the U.S. average. The dollars above (+) or below (-) the amount of reimbursements predicted by the experience in the benchmark area for 1992-93 are in parentheses. For example, price adjusted professional and laboratory expenditures per Medicare enrollee in Boston were 1.78 times higher than in Minneapolis. If the expenditures in Minneapolis in 1992-93 had obtained in Boston, $68.6 million less would have been spent on professional and laboratory services for Medicare residents of Boston.

Benchmarking: AAPCC

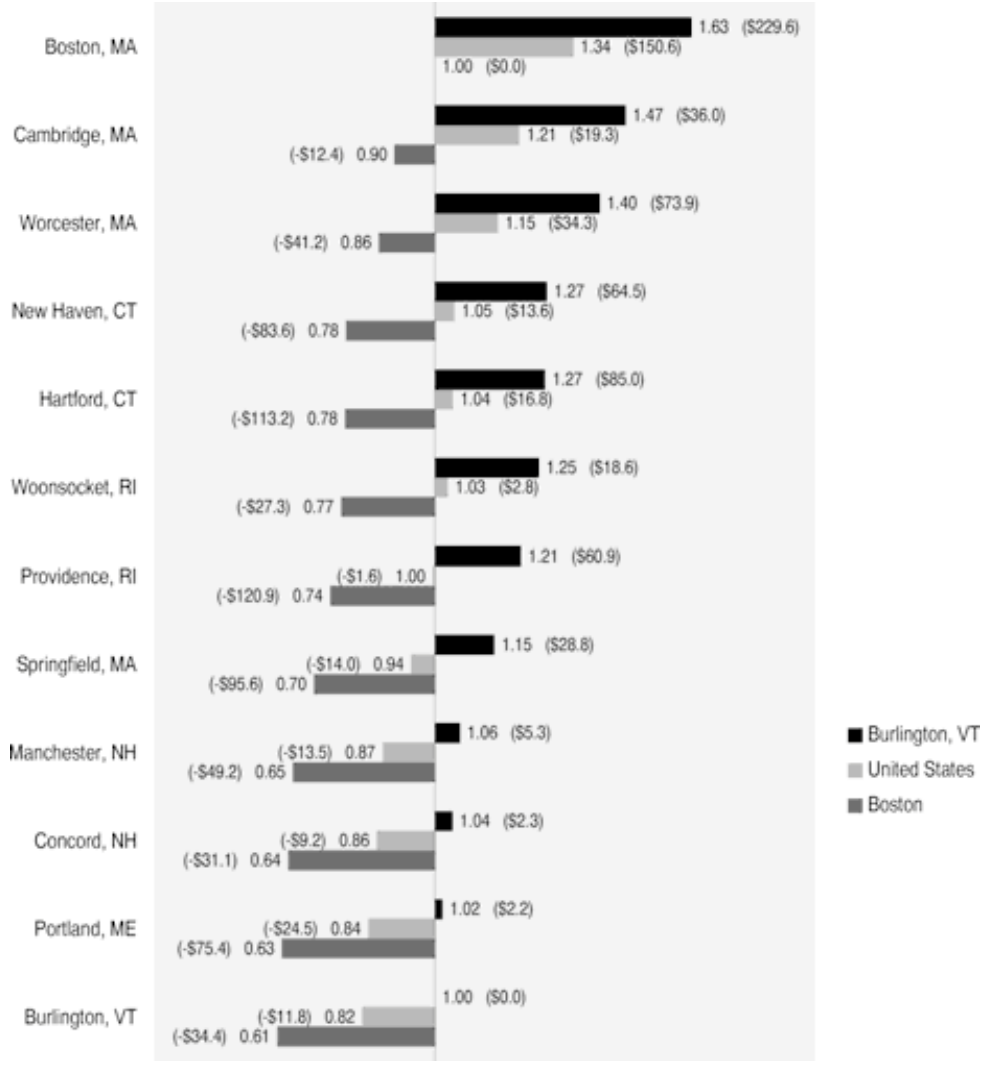


Figure 3.10. AAPCC in Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Areas (1996). The AAPCC is Not Adjusted for Price Differences.
The figure gives the ratio of the AAPCC in selected areas to the highest and lowest ranked areas. The amount of money the federal government spends in each hospital service area is determined by a formula that takes into account historical expenditures in the enrollee's county of residence. The numbers in parentheses are weighted by the population in the selected areas, giving the total dollars that would be gained (+) or lost (-) if the AAPCC in the high or low areas were the benchmark used to establish reimbursement levels for the region. For example, the AAPCC for Boston is 1.63 times greater than for Burlington, Vermont. If the AAPCC for Burlington applied to the Boston hospital service area — and Medicare enrollees in Boston were all members of risk bearing health maintenance organizations — managed care companies' revenues would be $229.6 million lower.

Benchmarking: AAPCC

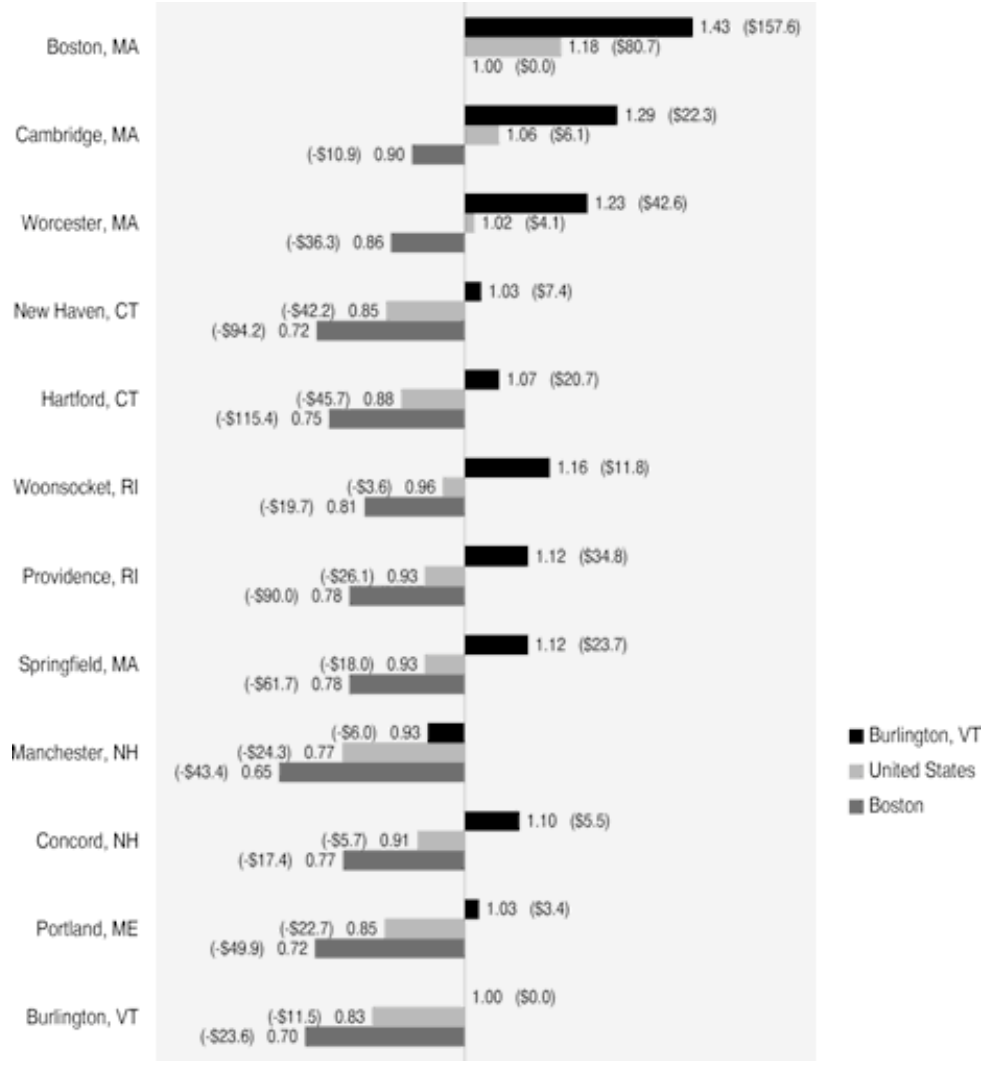


Figure 3.11. Price Adjusted AAPCC in Selected Hospital Service Areas in the New England States Compared to Highest and Lowest Ranked Areas (1996).

In this figure, the AAPCC has been adjusted to remove differences in price as a contribution to differences in AAPCCs among hospital service areas. While adjustment has some effect, most of the differences in AAPCC within the region cannot be explained on the basis of price difference. For example, on a price adjusted basis, the AAPCC in Boston is 1.43 times greater than in Burlington, Vermont; and on an unadjusted basis, it is 1.63 times greater.

Benchmarking: AAPCC

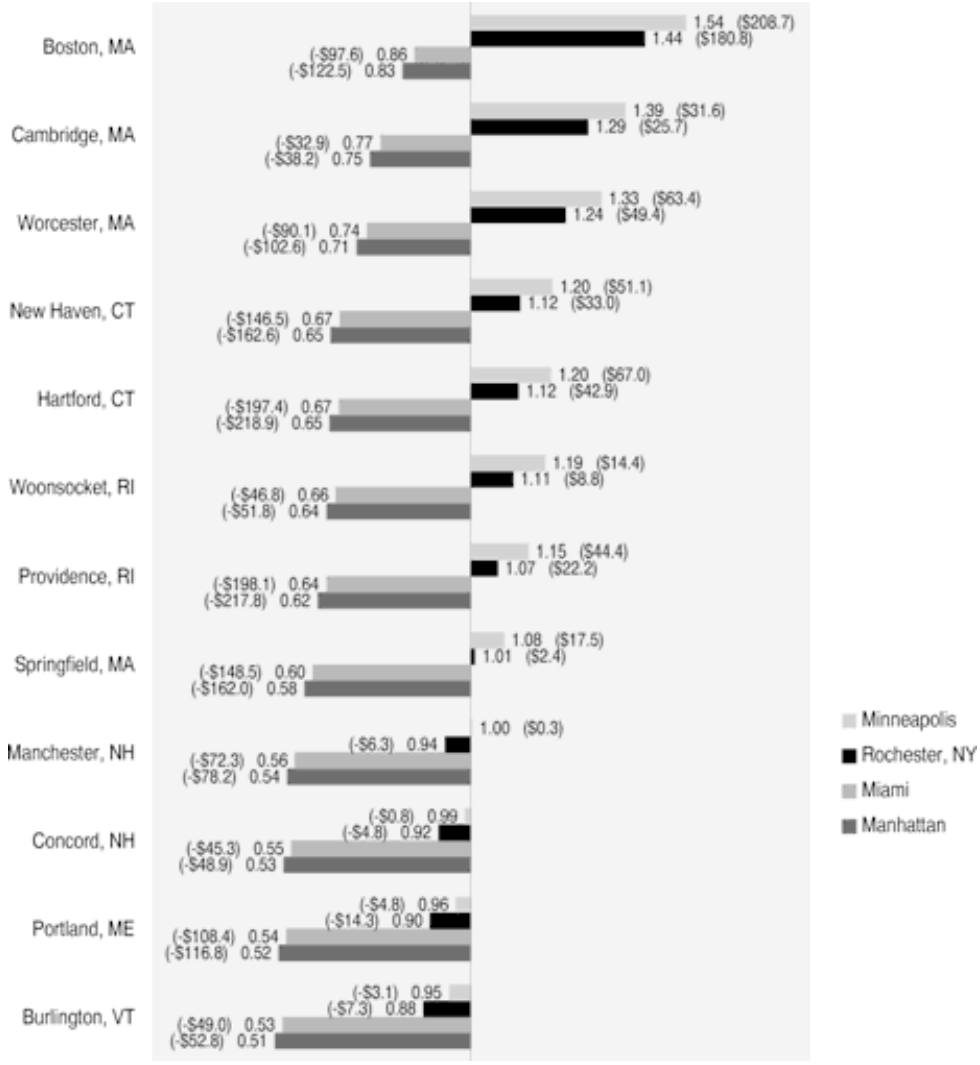


Figure 3.12. AAPCC in Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1996). The AAPCC is Not Adjusted for Price Differences.
The figure gives the ratio of the AAPCC in each area to selected hospital service areas in other parts of the United States. The numbers in parentheses are weighted by the population in the selected area to give the total dollars that would be gained (+) or lost (-) if the AAPCC in the reference hospital service area were the benchmark used to establish reimbursement levels in the region. For example, the Boston's AAPCC is only 83% Manhattan's. If the AAPCC for Manhattan were applied to the Boston hospital service area — and the Medicare enrollees in Boston were all members of risk bearing health maintenance organizations — the managed care companies' revenues would be $122.5 million higher.

Benchmarking: AAPCC

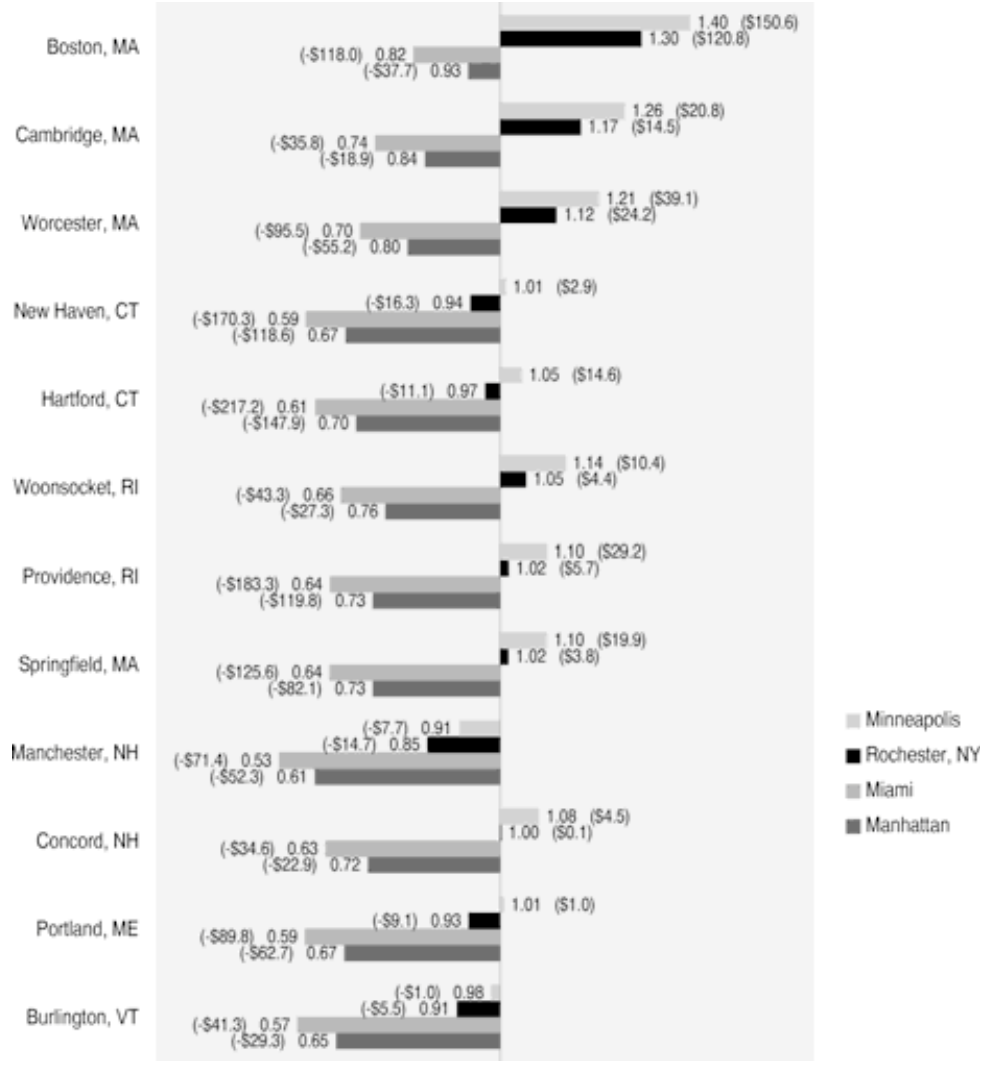


Figure 3.13. Price Adjusted AAPCC in Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1996) The AAPCC is Adjusted for Price Differences.

In this figure, the AAPCC has been adjusted to remove differences in price as a contribution to differences in AAPCCs among hospital service areas. Sometimes the difference narrows with price adjustment. For example, on an unadjusted basis, Boston's AAPCC is 54% higher than the AAPCC for the Minneapolis hospital service area. On a price adjusted basis, the AAPCC for Boston is only 40% higher than the AAPCC for Minneapolis. Sometimes the difference widens with adjustment: on an unadjusted basis, Boston's AAPCC is 14% lower than Miami's, but on an adjusted basis, Boston's AAPCC is 18% lower than Miami's.

TABLE 3 The data are age, sex and race adjusted for Medicare enrollees who were not members of risk bearing health maintenance organizations on June 30, 1993. See Part Nine, section 4, of the national volume of the Dartmouth Atlas of Health Care for details on constructing rates and making price adjustments.

Data for three categories of expenditure — total expenditures, physician and laboratory services, and outpatient services — are based on a 5% sample of Medicare enrollees. To report average reimbursement rates in the figures and maps in Part Three with adequate statistical precision, we required that the sample size for a hospital service area (HSA) be large enough to ensure that the rate have a standard error of less than 10% of the national average. The minimum sample size varies according to category of expenditures, since a varying proportion of enrollees experience a claim, according to category. For total Medicare expenditures, the minimum sample size is 600 enrollees; since the estimate is based on a 5% sample, only HSAs with 12,000 enrollee person-years of experience are included in the figures and maps. For professional and laboratory services, the minimum is 6,720 person-years; for outpatient services it is 18,300. Rates for HSAs with less than the minimum population size are given in parentheses in Table 3. Rates for areas with fewer than 400 person-years (i.e., a sample of 10 or fewer) are omitted from the table.

Inpatient reimbursements are based on a complete enumeration (100% sample) for the years 1992-93. We omitted all areas with total census population of 3,500 or fewer from the figures and maps. The data for areas that fall below this minimum appear in parentheses in Table 3.

Data for HSAs with 10 or fewer counts is omitted from the table (the cell is blank),

The AAPCC is the Average Adjusted per Capita Cost. The data for the AAPCC are based on published federal rates. For hospital service areas that cross county boundaries, the rates are weighted averages. Price adjustments to the AAPCC were made according to the method described in Part Nine of the national volume of the Dartmouth Atlas of Health Care.

TABLE 3

Medicare Reimbursements per Enrollee by Program Components (1992-93) and Adjusted Average Per Capita Cost (1996) for Hospital Service Areas

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	Price Adjusted Reimbursements for All Services	Price Adjusted Reimbursements for Professional and Lab Services	Price Adjusted Reimbursements for Inpatient Hospital Services	Price Adjusted Reimbursements for Outpatient Facilities	AAPCC (1996)	Price-Adjusted AAPCC (1996)
Connecticut								
Bridgeport	299,628	87,521	2,899	860	1,430	277	5,741	4,674
Bristol	76,599	20,205	3,360	870	1,788	329	5,473	4,618
Danbury	159,854	30,989	3,309	973	1,597	332	5,741	4,674
Derby	89,022	25,084	2,995	895	1,511	226	5,614	4,570
Greenwich	58,506	18,585	3,735	934	1,483	314	5,741	4,674
Hartford	511,789	144,402	3,252	891	1,564	289	5,523	4,660
Manchester	85,015	21,766	3,305	964	1,508	312	5,526	4,663
Meriden	100,279	28,462	3,189	956	1,487	434	5,542	4,512
Middletown	158,987	41,221	2,461	791	1,399	326	4,861	4,101
Milford	49,940	14,309	3,091	895	1,528	(234)	5,542	4,512
New Britain	109,594	34,470	3,258	940	1,607	271	5,525	4,662
New Haven	386,607	108,187	3,113	895	1,545	268	5,542	4,512
New London	154,948	35,630	3,204	855	1,464	452	4,727	4,231
New Milford	43,274	9,551	(3,911)	1,073	1,811	(443)	5,155	4,778
Norwalk	145,346	36,718	3,379	1,035	1,443	279	5,741	4,674
Norwich	70,355	18,500	3,683	930	1,699	352	4,739	4,242
Putnam	67,281	17,562	3,774	863	1,679	(425)	5,110	4,736
Rockville	52,009	10,529	(3,594)	897	1,585	(424)	5,543	4,677
Sharon	38,423	12,249	3,644	950	1,718	(328)	5,090	4,718
Southington	38,591	10,081	(3,888)	1,042	1,848	(366)	5,525	4,662
Stafford Springs	72,350	15,987	3,643	1,010	1,590	(298)	5,531	4,667
Stamford	126,055	32,576	3,237	961	1,645	216	5,741	4,674
Torrington	56,737	18,039	3,060	799	1,791	(350)	5,100	4,727
Waterbury	255,132	74,277	3,381	986	1,686	258	5,476	4,458
Willimantic	75,325	14,515	4,533	1,043	1,819	(394)	5,267	4,882
Winsted	18,623	5,035	(2,656)	(625)	1,513	(291)	5,100	4,727
Maine								
Augusta	68,143	18,003	3,394	795	1,450	(383)	3,644	4,138
Bangor	121,418	27,690	2,802	737	1,694	244	4,048	4,516
Bar Harbor	9,698	3,694	(3,071)	(639)	1,802	(261)	3,896	4,425
Belfast	18,596	5,615	(3,438)	(715)	1,529	(435)	3,726	4,231
Biddeford	61,604	17,996	3,295	1,001	1,701	(288)	4,163	4,727
Blue Hill	8,522	3,433	(2,871)	(801)	1,494	(140)	3,896	4,424
Boothbay Harbor	5,640	2,414	(2,745)	(666)	1,571	(317)	4,014	4,558
Bridgton	14,858	4,560	(2,988)	(717)	1,875	(200)	4,411	4,476
Brunswick	69,003	17,171	2,555	660	1,439	(186)	4,173	4,234
Calais	14,450	4,648	(3,106)	(672)	2,151	(273)	3,853	4,376
Caribou	27,267	5,907	(2,699)	(759)	1,763	(284)	3,610	4,099

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	Price Adjusted Reimbursements for All Services	Price Adjusted Reimbursements for Professional and Lab Services	Price Adjusted Reimbursements for Inpatient Hospital Services	Price Adjusted Reimbursements for Outpatient Facilities	AAPCC (1996)	Price-Adjusted AAPCC (1996)
Damariscotta	9,152	4,148	(3,941)	(819)	1,746	(318)	4,014	4,558
Dover-Foxcroft	21,483	6,662	(2,763)	(632)	1,761	(329)	3,852	4,374
Ellsworth	21,025	6,583	(2,801)	(675)	1,691	(298)	3,888	4,415
Farmington	35,630	9,580	(3,209)	658	1,768	(399)	4,248	4,824
Fort Kent	13,563	4,208	(3,179)	(720)	1,677	(229)	3,610	4,099
Greenville	3,790	1,399	(3,531)	(831)	1,614	(397)	3,754	4,263
Houlton	18,053	5,764	(4,038)	(781)	1,931	(354)	3,667	4,164
Lewiston	112,342	28,883	3,785	889	1,856	372	4,228	4,789
Lincoln	14,280	3,763	(2,770)	(679)	1,977	(235)	4,056	4,524
Machias	15,962	5,375	(3,149)	(656)	1,720	(286)	3,853	4,376
Millinocket	12,843	3,481	(3,357)	(906)	2,126	(405)	4,039	4,505
Norway	25,007	7,492	(3,923)	895	1,753	(441)	4,357	4,948
Pittsfield	17,534	4,384	(3,099)	(755)	1,738	(461)	3,813	4,330
Portland	215,490	56,499	2,937	842	1,716	228	4,429	4,493
Presque Isle	28,392	7,674	(2,605)	680	1,545	(245)	3,610	4,099
Rockland	44,103	15,196	3,245	690	1,704	(229)	3,845	4,366
Rumford	16,930	5,645	(3,646)	(861)	2,305	(258)	4,357	4,948
Sanford	44,589	10,351	(2,531)	696	1,551	(241)	4,163	4,727
Skowhegan	29,758	8,272	(3,282)	675	1,901	(429)	3,615	4,105
Waterville	64,687	16,116	3,795	852	1,647	(466)	3,618	4,108
York	30,504	9,925	(3,954)	889	1,961	(424)	4,163	4,727
Massachusetts								
Arlington	73,533	24,053	3,602	836	1,860	389	6,384	5,633
Athol	23,913	6,877	(3,583)	820	1,916	(333)	5,535	4,884
Attleboro	102,110	19,908	3,811	861	1,855	287	5,128	4,525
Ayer	57,962	8,266	(4,505)	938	1,923	(389)	6,353	5,606
Beverly	111,015	29,755	3,426	864	1,597	348	5,710	5,038
Boston	768,694	167,330	4,764	967	2,428	527	7,084	6,251
Brockton	239,486	52,577	4,117	1,054	2,159	319	6,144	5,422
Burlington	23,093	4,167	(2,740)	(647)	1,819	(319)	6,384	5,633
Cambridge	152,358	35,097	3,828	887	2,125	365	6,384	5,633
Clinton	19,287	4,365	(5,970)	(1,156)	2,070	(478)	6,106	5,388
Concord	93,269	18,007	4,075	958	1,739	(359)	6,384	5,633
Everett	35,493	10,772	(5,103)	932	2,473	(412)	6,384	5,633
Fall River	161,355	51,391	3,353	864	1,874	247	4,984	4,398
Falmouth	66,543	24,936	3,959	996	1,860	368	5,462	5,110
Fitchburg	55,412	13,871	3,523	774	1,628	(340)	6,120	5,401
Gardner	50,090	12,037	3,690	773	1,741	(348)	6,106	5,388
Gloucester	36,198	10,772	(3,617)	862	1,956	(237)	5,710	5,038
Great Barrington	21,360	7,139	(3,102)	798	1,728	(330)	5,240	5,146
Greenfield	60,801	16,748	3,722	710	1,677	(470)	4,529	4,671
Haverhill	77,130	19,014	3,449	789	1,868	232	5,585	4,929
Holyoke	67,693	20,180	3,725	913	1,765	349	4,866	4,781
Hyannis	121,922	63,970	3,373	884	1,659	292	5,462	5,110
Lawrence	122,521	27,589	3,467	874	1,788	306	5,710	5,038
Leominster	38,145	8,660	(3,727)	761	1,839	(457)	6,106	5,388

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	Price Adjusted Reimbursements for All Services	Price Adjusted Reimbursements for Professional and Lab Services	Price Adjusted Reimbursements for Inpatient Hospital Services	Price Adjusted Reimbursements for Outpatient Facilities	AAPCC (1996)	Price-Adjusted AAPCC (1996)
Lowell	259,507	49,557	3,914	842	1,986	327	6,335	5,590
Ludlow	18,820	5,917	(3,525)	(734)	1,615	(461)	4,984	4,896
Lynn	96,347	26,635	4,020	890	1,962	429	5,710	5,038
Malden	54,114	14,500	4,536	893	2,425	(472)	6,384	5,633
Marlborough	52,180	10,729	(4,278)	1,139	2,199	(488)	6,372	5,623
Medford	57,338	17,954	3,785	879	2,110	(352)	6,384	5,633
Melrose	78,545	23,621	3,727	896	2,086	357	6,163	5,438
Methuen	65,410	18,549	3,860	990	1,706	321	5,448	4,808
Milton	25,558	8,444	(4,756)	1,154	2,189	(621)	6,695	5,908
Nantucket	6,012	1,799	(5,134)	(908)	2,137	(602)	6,137	6,329
Natick	210,485	45,891	4,301	1,040	2,052	346	6,382	5,632
Needham	27,576	8,814	(3,809)	1,025	1,888	(455)	6,695	5,908
New Bedford	163,683	52,785	3,071	861	1,819	151	5,024	4,433
Newburyport	63,370	15,985	4,214	995	1,970	(380)	5,576	4,921
Newton	83,348	22,110	3,952	1,094	2,100	425	6,481	5,719
Norfolk	40,393	6,518	(5,764)	(1,360)	2,019	(449)	6,695	5,908
North Adams	39,439	14,201	3,307	805	1,779	(300)	5,429	5,331
Northampton	101,922	20,698	3,023	664	1,325	299	4,631	4,550
Norwood	110,164	31,083	4,169	1,066	1,978	309	6,695	5,908
Oak Bluffs	11,541	3,886	(3,297)	(828)	2,641	(311)	6,623	6,830
Palmer	20,397	6,077	(3,596)	(819)	1,900	(605)	4,984	4,896
Pittsfield	100,989	32,040	4,003	960	2,026	238	5,352	5,256
Plymouth	81,544	19,097	4,399	1,088	1,857	391	6,065	5,352
Quincy	67,250	22,139	4,271	1,064	2,204	332	6,695	5,908
Salem	118,948	35,378	4,162	911	1,825	366	5,710	5,038
Somerville	76,393	16,273	4,604	899	2,374	(373)	6,384	5,633
South Weymouth	215,427	53,707	4,396	1,016	2,028	354	6,383	5,632
Southbridge	41,352	9,295	(2,654)	699	1,752	(242)	5,986	5,282
Springfield	312,914	90,992	3,494	829	1,803	297	4,984	4,896
Stoneham	22,147	6,778	(4,717)	921	1,924	(382)	6,384	5,633
Stoughton	26,777	7,149	(3,731)	1,089	2,143	(293)	6,695	5,908
Taunton	95,195	23,203	4,134	1,019	1,922	403	5,232	4,617
Waltham	68,092	17,371	4,268	969	2,127	(438)	6,384	5,633
Ware	31,070	7,734	(3,441)	706	1,747	(315)	5,105	5,016
Wareham	25,767	7,949	(4,065)	961	1,776	(215)	6,065	5,352
Webster	25,736	6,496	(3,838)	(812)	1,822	(380)	6,106	5,388
Westfield	53,368	13,448	3,816	807	1,582	(420)	4,971	4,884
Winchester	108,572	26,968	4,070	936	1,878	415	6,384	5,633
Winthrop	18,907	5,708	(4,246)	(929)	2,541	(366)	7,195	6,349
Worcester	405,867	84,525	3,762	917	1,958	344	6,106	5,388
New Hampshire								
Berlin	17,855	6,637	(3,706)	(683)	1,828	(476)	4,384	4,662
Claremont	22,069	6,775	(2,545)	559	1,604	(421)	4,394	4,674
Colebrook	6,633	1,934	(3,254)	(677)	1,391	(342)	4,275	4,546
Concord	105,055	24,207	3,478	763	1,644	275	4,536	4,825
Derry	47,907	5,944	(2,692)	(664)	1,438	(284)	4,837	4,269

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	Price Adjusted Reimbursements for All Services	Price Adjusted Reimbursements for Professional and Lab Services	Price Adjusted Reimbursements for Inpatient Hospital Services	Price Adjusted Reimbursements for Outpatient Facilities	AAPCC (1996)	Price-Adjusted AAPCC (1996)
Dover	74,625	14,933	3,321	771	1,255	(382)	4,387	3,872
Exeter	79,010	17,156	2,953	735	1,407	(368)	4,837	4,269
Franklin	23,078	5,992	(3,015)	(614)	1,774	(368)	4,395	4,675
Keene	55,756	14,961	2,581	655	1,435	(226)	3,988	4,241
Laconia	43,292	13,907	2,850	708	1,674	(338)	4,295	4,568
Lancaster	13,428	4,425	(3,321)	(683)	1,703	(432)	4,300	4,573
Lebanon	61,167	15,663	2,840	551	1,604	(359)	4,107	4,368
Littleton	14,253	4,251	(2,526)	(466)	1,340	(289)	4,214	4,482
Manchester	174,345	39,488	2,867	760	1,294	216	4,615	4,073
Nashua	163,513	28,485	2,543	688	1,444	269	4,595	4,055
New London	22,944	7,417	(3,198)	649	1,428	(383)	4,468	4,752
North Conway	14,058	4,358	(2,357)	(521)	1,448	(188)	4,156	4,420
Peterborough	33,448	7,653	(2,402)	585	1,249	(266)	4,411	3,892
Plymouth	17,010	4,223	(3,178)	(720)	1,608	(403)	4,214	4,482
Portsmouth	35,135	9,002	(2,778)	746	1,565	(263)	4,837	4,269
Rochester	42,504	10,140	(3,096)	702	1,285	(290)	4,416	3,897
Wolfeboro	18,800	7,952	(3,307)	651	1,559	(402)	4,178	4,443
Woodsville	13,878	4,627	(2,776)	(570)	1,686	(368)	4,083	4,342
Rhode Island								
Newport	69,543	16,511	3,295	822	1,561	(349)	4,964	4,541
Pawtucket	89,835	25,386	3,614	831	1,865	355	5,312	4,941
Providence	469,499	133,545	3,588	915	1,819	349	5,266	4,898
Wakefield	56,533	12,515	4,116	990	1,636	(350)	5,303	4,932
Warwick	187,117	50,130	3,647	926	1,809	308	5,431	5,052
Westerly	49,390	13,648	3,771	864	1,682	(427)	5,094	4,738
Woonsocket	127,734	33,689	3,600	905	1,718	271	5,457	5,076
Vermont								
Bennington	48,768	14,104	3,157	792	1,738	(322)	4,117	4,589
Berlin	61,594	15,240	2,889	654	1,551	(349)	3,910	4,359
Brattleboro	29,089	7,374	(3,406)	660	1,557	(367)	3,885	4,331
Burlington	142,306	24,815	3,028	727	1,658	304	4,350	4,375
Middlebury	27,976	6,228	(2,467)	(616)	1,549	(279)	3,971	4,426
Morrisville	22,493	5,599	(3,611)	(774)	1,719	(504)	3,956	4,410
Newport	23,298	6,847	(3,728)	669	1,628	(550)	3,981	4,438
Randolph	17,561	4,450	(2,699)	(464)	1,692	(453)	4,005	4,464
Rutland	64,801	18,495	2,712	605	1,804	321	4,084	4,552
Springfield	29,187	10,220	(2,304)	731	1,585	(394)	3,891	4,337
St Albans	38,242	9,150	(2,946)	586	1,674	(367)	4,158	4,181
St Johnsbury	24,303	6,622	(2,609)	(473)	1,400	(361)	3,576	3,987
Townshend	4,115	1,228	(2,622)	(797)	1,452	(534)	3,866	4,310
Windsor	8,165	2,588	(2,348)	(474)	1,403	(361)	3,896	4,343

PART FOUR

The Physician Workforce in New England

This section provides measures of the allocation of physicians who are in active practice to the populations living in the New England States' hospital service areas. A physician in active practice is defined as one who reported that he or she spent at least 20 hours a week in patient care.

The estimates for the physician workforce per 100,000 take into account patient migration across the boundaries of hospital service areas and have been adjusted for differences in age and sex of the local populations. Part Nine of the national volume of the Dartmouth Atlas of Health Care explains how these adjustments were made.

The data, which come from the American Medical Association, the American Osteopathic Association, and the Medicare program, are for 1993. The population count is based on the 1990 United States census. The data used for the health maintenance organization benchmark is from a large staff model health maintenance organization. It has been adjusted to account for differences in age and sex according to methods described in Part Nine of the national Atlas. Additional adjustments were made to account for out-of-plan use, as described in the note to Table 4.

The Physician Workforce Active in Patient Care

The New England States had a relatively high supply of physicians, both specialists and those in primary care, per hundred thousand residents. The hospital service areas in Boston (331); New Haven, Connecticut (291); Providence, Rhode Island (222); Portland, Maine (211); and Burlington, Vermont (198) all had supplies of physicians in active practice in excess of the national average; the Manchester, New Hampshire, hospital service area, with 161, was below it.

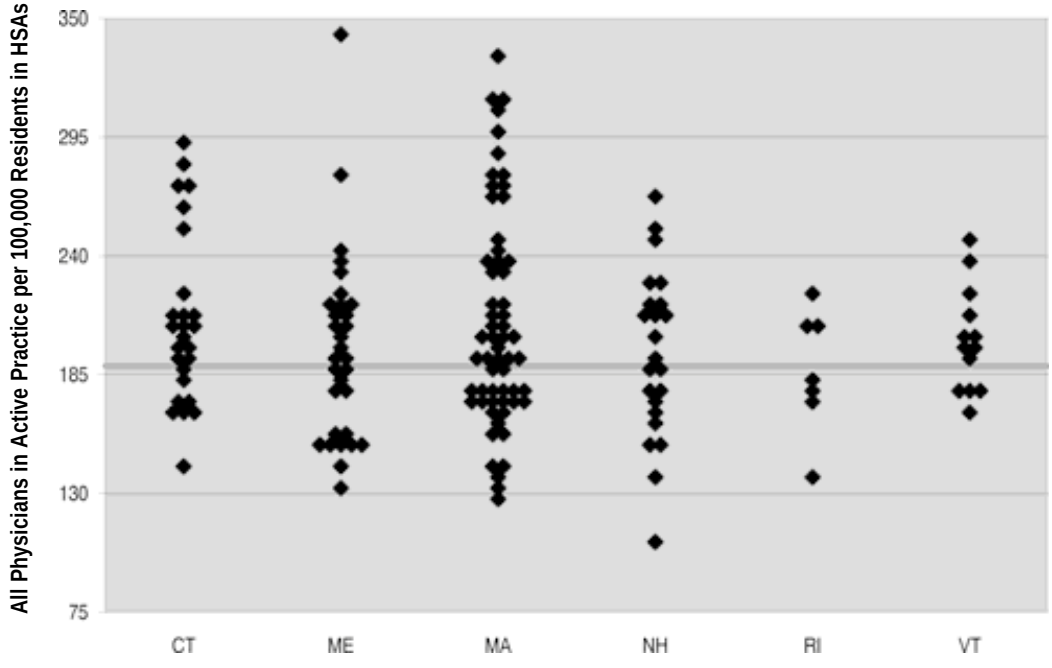
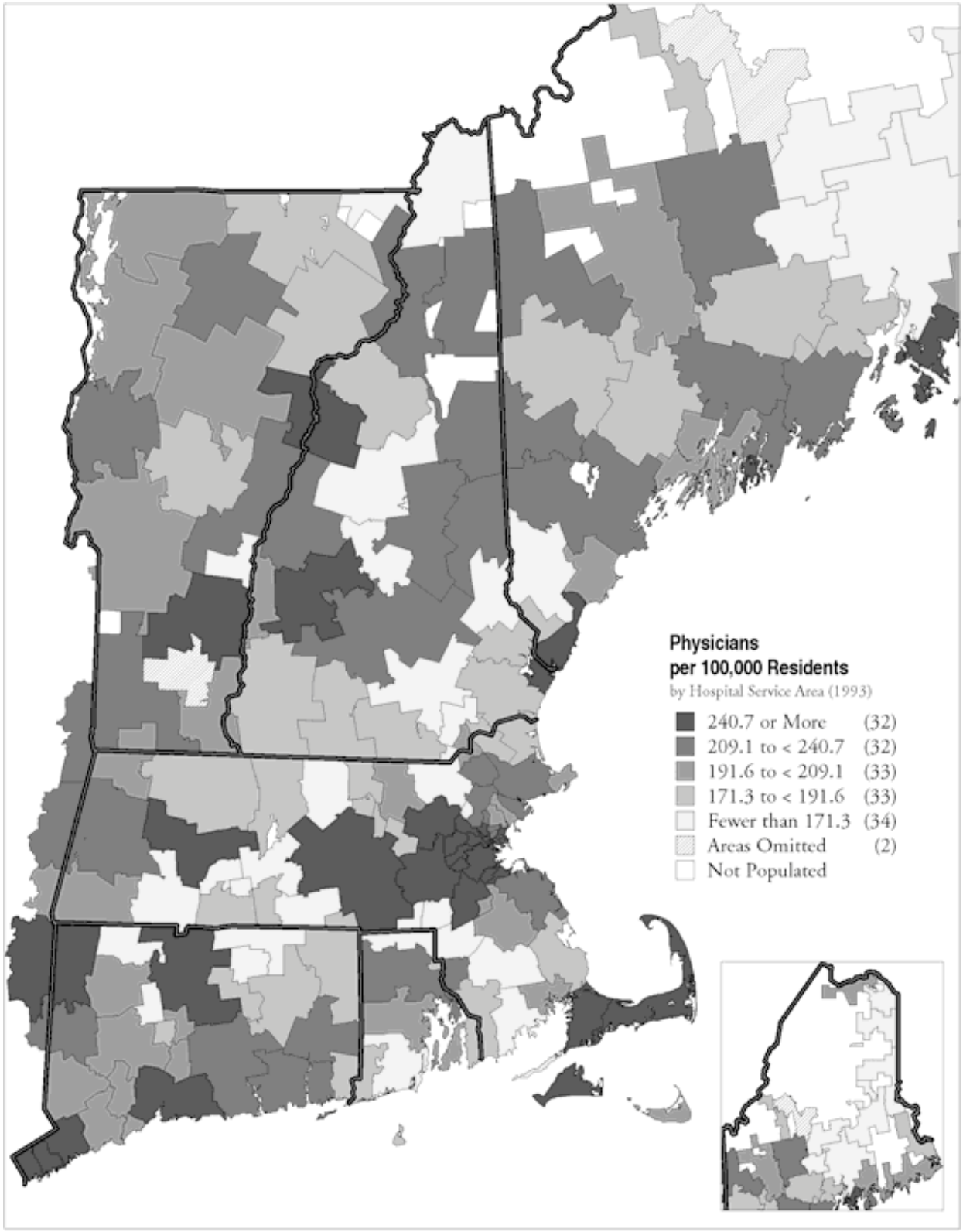


Figure 4.1. Physicians Allocated to Hospital Service Areas in the New England States (1993)
The number of physicians in active practice per hundred thousand residents, after adjusting for differences in age and sex of the local population, ranged from fewer than 110 to more than 325. Each point represents one hospital service area.


Physicians
per 100,000 Residents
by Hospital Service Area (1993)
240.7 or More (32)
209.1 to < 240.7 (32)
191.6 to < 209.1 (33)
171.3 to < 191.6 (33)
Fewer than 171.3 (34)
Areas Omitted (2)
Not Populated

Specialist Physicians

The supply of physicians per hundred thousand residents in specialty practice in the New England States was greater in the larger cities and their surrounding suburban areas, and in some resort areas of the region. The Boston hospital service area, with 218 specialists per hundred thousand residents, was not dramatically higher than New Haven, Connecticut, which had 195; and areas such as Boothbay Harbor, Maine (191); Falmouth, Massachusetts (185); and Hyannis, Massachusetts (183) were close to the level of the major medical teaching centers. The hospital service areas in Portland, Maine (135); Providence, Rhode Island (145); Burlington, Vermont (123); and Manchester, New Hampshire (107) were closer to the United States average of 122 specialists per hundred thousand population.

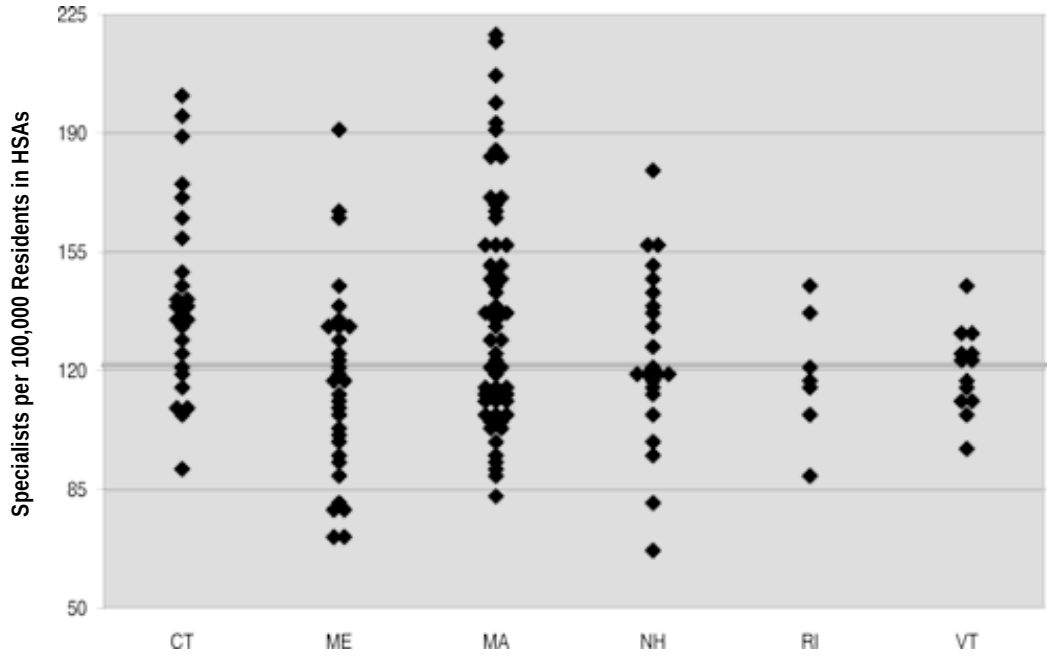
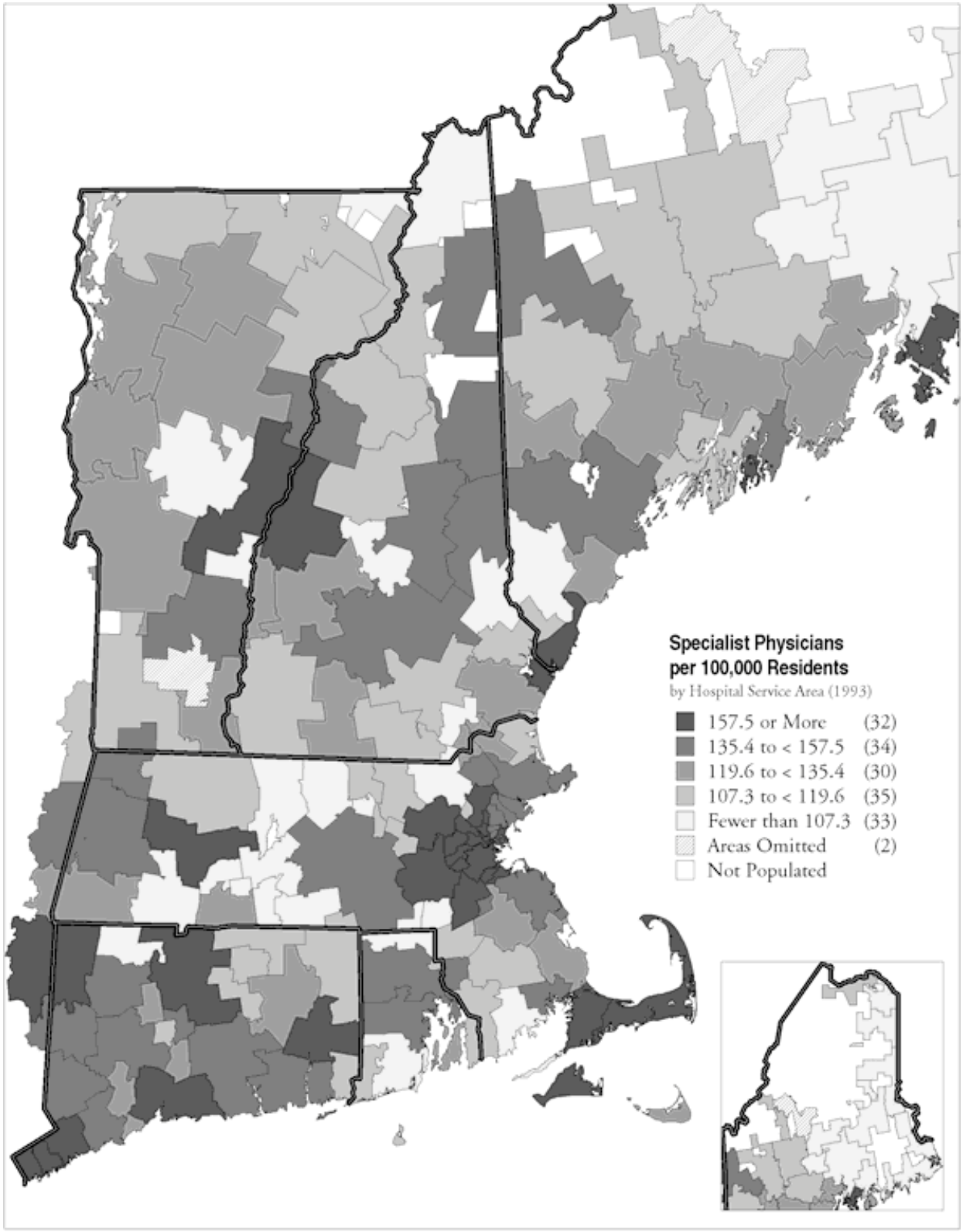
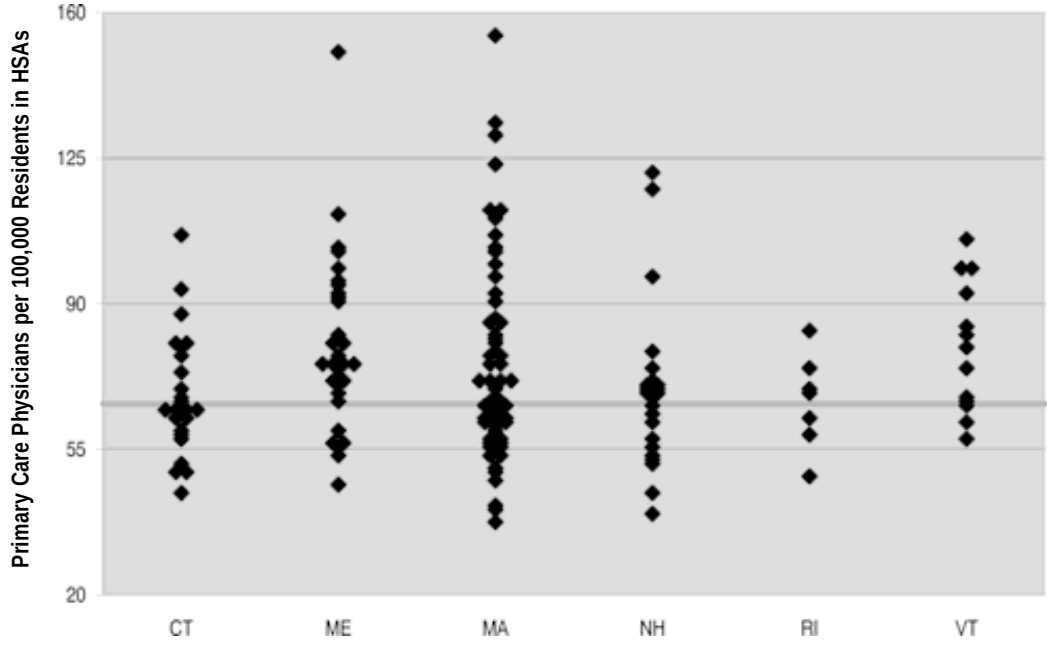


Figure 4.2. Specialists Allocated to Hospital Service Areas in the New England States (1993)
The number of specialist physicians in active practice per hundred thousand residents, after adjusting for differences in age and sex of the local population, ranged from fewer than 70 to more than 215. Each point represents one hospital service area.


Specialist Physicians
per 100,000 Residents
by Hospital Service Area (1993)
157.5 or More (32)
135.4 to < 157.5 (34)
119.6 to < 135.4 (30)
107.3 to < 119.6 (35)
Fewer than 107.3 (33)
Areas Omitted (2)
Not Populated

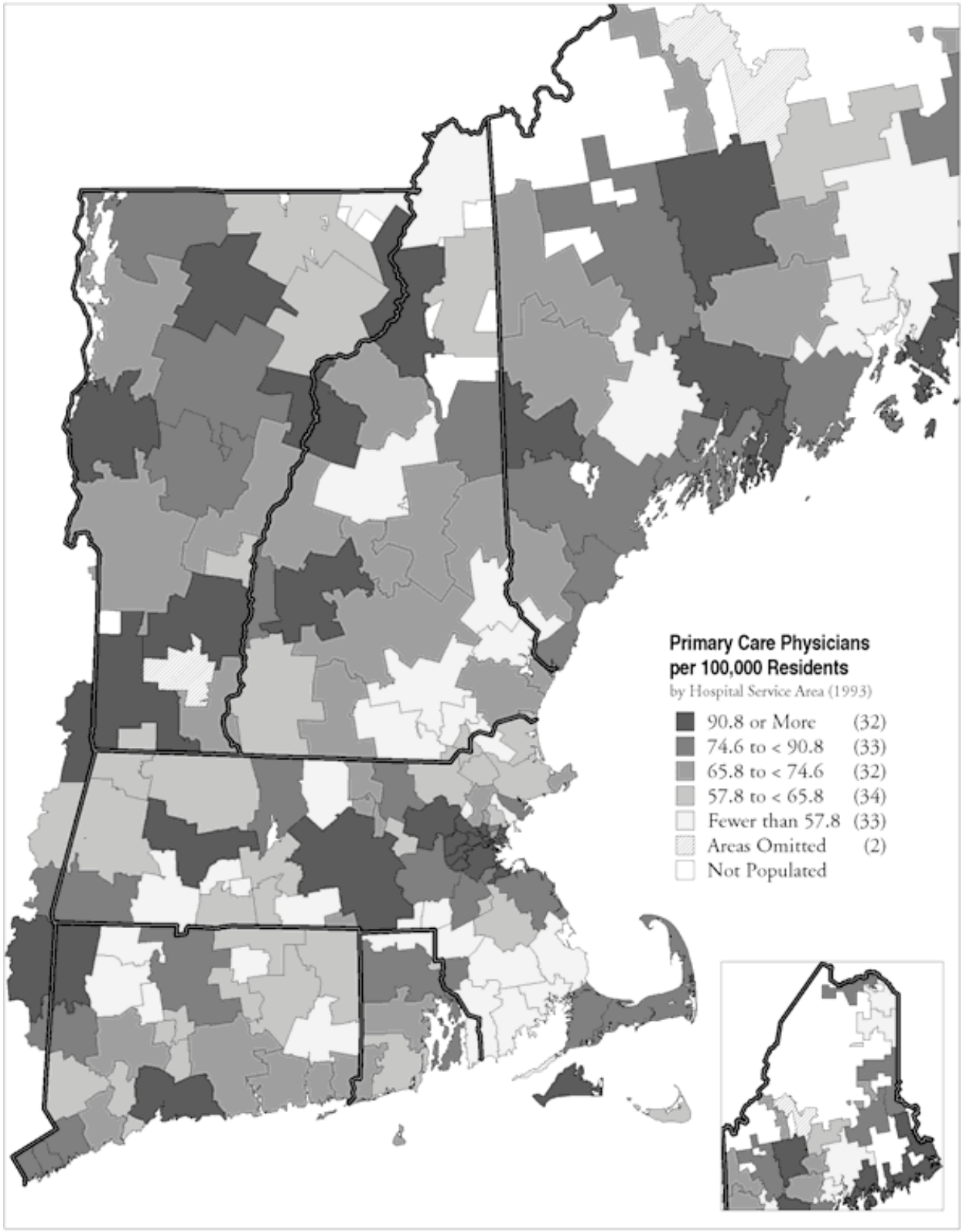
Physicians in Primary Care

The New England States had a robust supply of primary care physicians in active practice, when compared to other areas of the nation. Differences in the rates of primary care physicians per hundred thousand residents, however, were significant, even among the region's larger cities. Boston, with 110 primary care physicians per hundred thousand residents, had a supply 66% higher than the United States average of 66; New Haven, Connecticut (93); Portland, Maine (75); Providence, Rhode Island (75); and Burlington, Vermont (74) were also above the national average. The Manchester, New Hampshire, hospital service area, with 53, was below the national average supply of primary care physicians, and some areas, including New Bedford, Massachusetts (38); Bristol, Connecticut (44); and Woonsocket, Rhode Island (48), were well below it.



The New England States. The gray horizontal line represents the United States average.

Figure 4.3. Primary Care Physicians Allocated to Hospital Service Areas in the New England States (1993)
The number of primary care physicians in active practice per hundred thousand residents, after adjusting for differences in age and sex of the local population, ranged from fewer than 40 to more than 150. Each point represents one hospital service area.


Primary Care Physicians
per 100,000 Residents
by Hospital Service Area (1993)
90.8 or More (32)
74.6 to < 90.8 (33)
65.8 to < 74.6 (32)
57.8 to < 65.8 (34)
Fewer than 57.8 (33)
Areas Omitted (2)
Not Populated

Benchmarking: The Physician Workforce Active in Patient Care

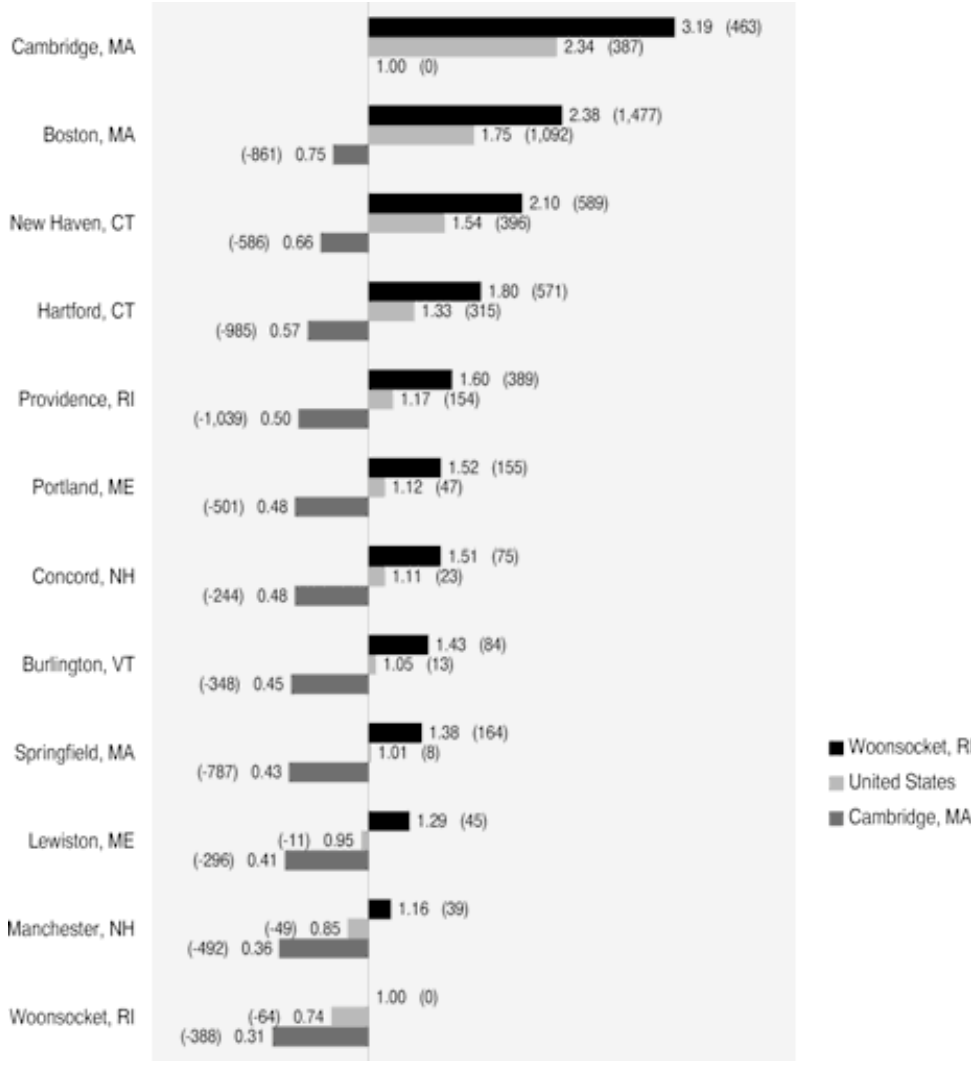


Figure 4.4. The Total Physician Workforce Allocated to Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Areas (1993)

The figure gives the ratio of the total physician workforce in selected hospital service areas to the highest and lowest ranked areas. It also compares the areas to the U.S. average. The number of physicians above (+) or below (-) the number predicted by the experience in the benchmark area for 1993 is in parentheses. For example, the number of physicians per 100,000 allocated to the residents of Cambridge, Massachusetts, was 3.19 times higher than Woonsocket, Rhode Island. If the level of the physician workforce of the 1993 Woonsocket benchmark had been attained for the residents of Cambridge, 463 fewer physicians would have been needed.

Benchmarking: The Physician Workforce Active in Patient Care

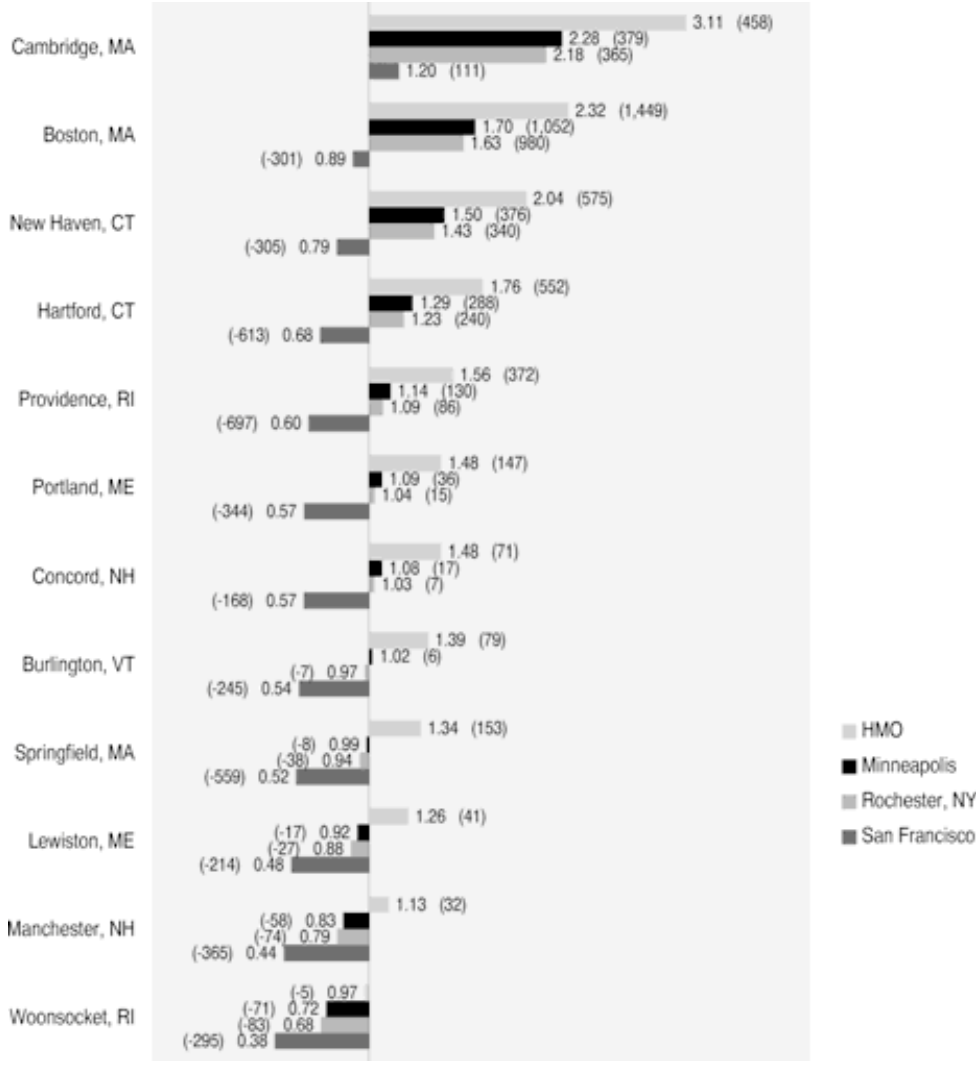


Figure 4.5. The Total Physician Workforce Allocated to Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. and to a Large HMO (1993)

The figure gives the ratio of the total physician workforce in selected hospital service areas in the New England States to other areas and to a large health maintenance organization. The number of physicians above (+) or below (-) the number predicted by the experience in the benchmark area is in parentheses. For example, the number of physicians per 100,000 allocated to the residents of Cambridge, Massachusetts, was 3.11 times higher than to the population of the health maintenance organization. If the workforce level of the 1993 health maintenance organization benchmark had been attained for the residents of Cambridge, 458 fewer physicians would have been needed. If the San Francisco benchmark had applied, 111 fewer physicians would have been needed.

Benchmarking: Specialists

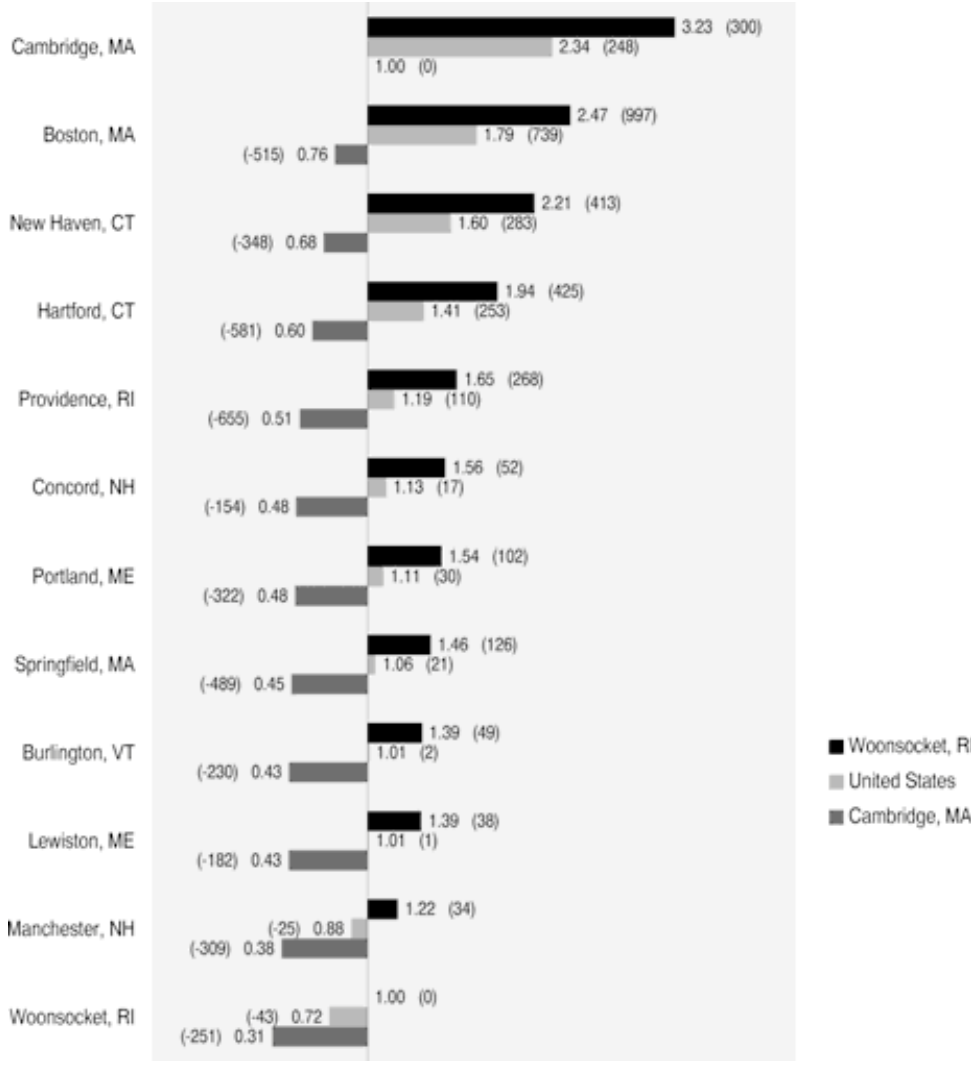


Figure 4.6. Specialist Physicians Allocated to Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Areas (1993)

The figure gives the ratio of specialists in selected hospital service areas to the highest and lowest ranked areas. It also compares the areas to the U.S. average. The number of specialists above (+) or below (-) the number predicted by the experience in the benchmark area for 1993 is in parentheses. For example, the number of specialists per 100,000 allocated to the residents of Cambridge, Massachusetts, was 3.23 times higher than Woonsocket, Rhode Island. If the level of specialists of the 1993 Woonsocket benchmark had been attained for the residents of Cambridge, 300 fewer specialists would have been needed.

Benchmarking: Specialists

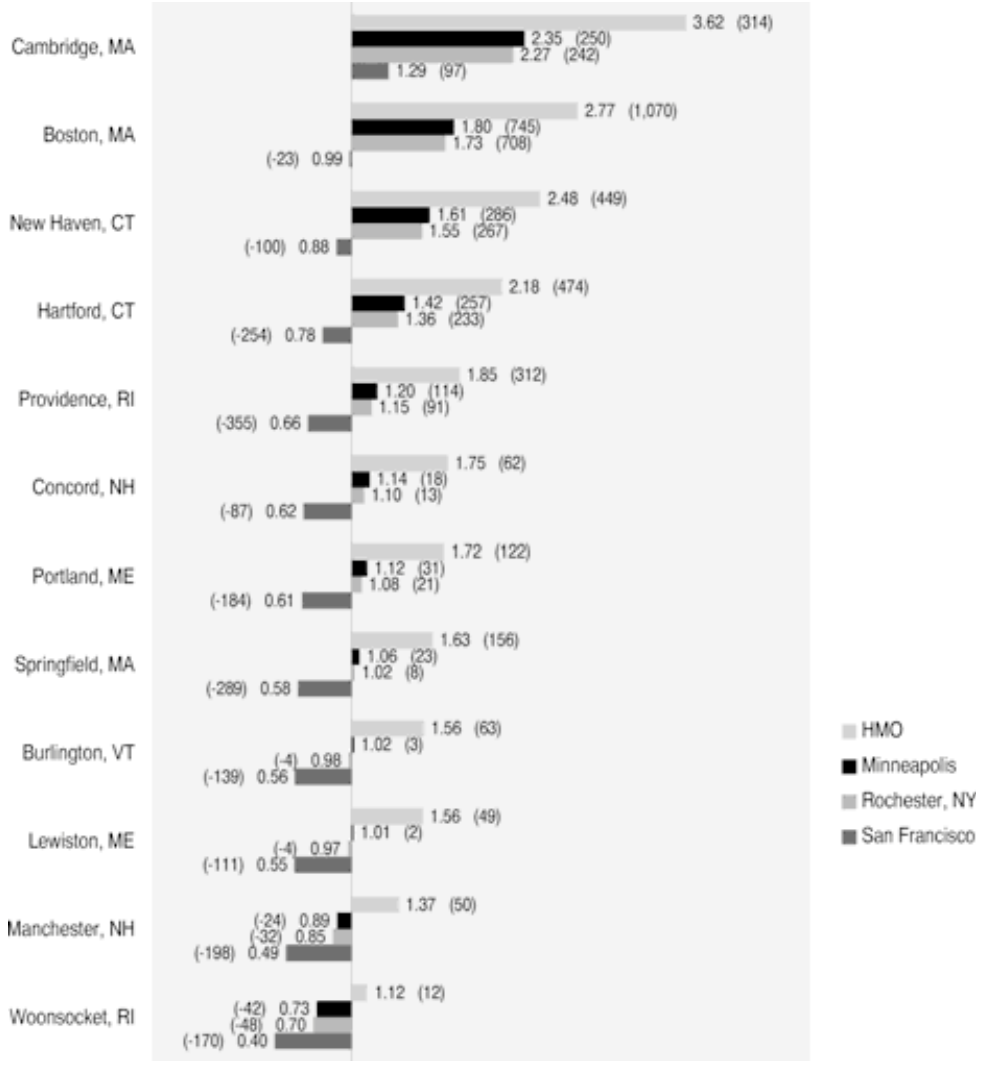


Figure 4.7. Specialist Physicians Allocated to Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. and to a Large HMO (1993)

The figure gives the ratio of specialists in selected hospital service areas in the New England States to other areas and to a large health maintenance organization. The number of specialists above (+) or below (-) the number predicted by the experience in the benchmark area is in parentheses. For example, the number of specialists per 100,000 allocated to the residents of Cambridge, Massachusetts, was 3.62 times higher than the supply allocated to the population of the health maintenance organization. If the level of supply of specialists of the 1993 health maintenance organization benchmark had been attained for the residents of Cambridge, 314 fewer specialists would have been needed. If the San Francisco benchmark had applied, 97 fewer specialists would have been needed.

Benchmarking: Primary Care Physicians

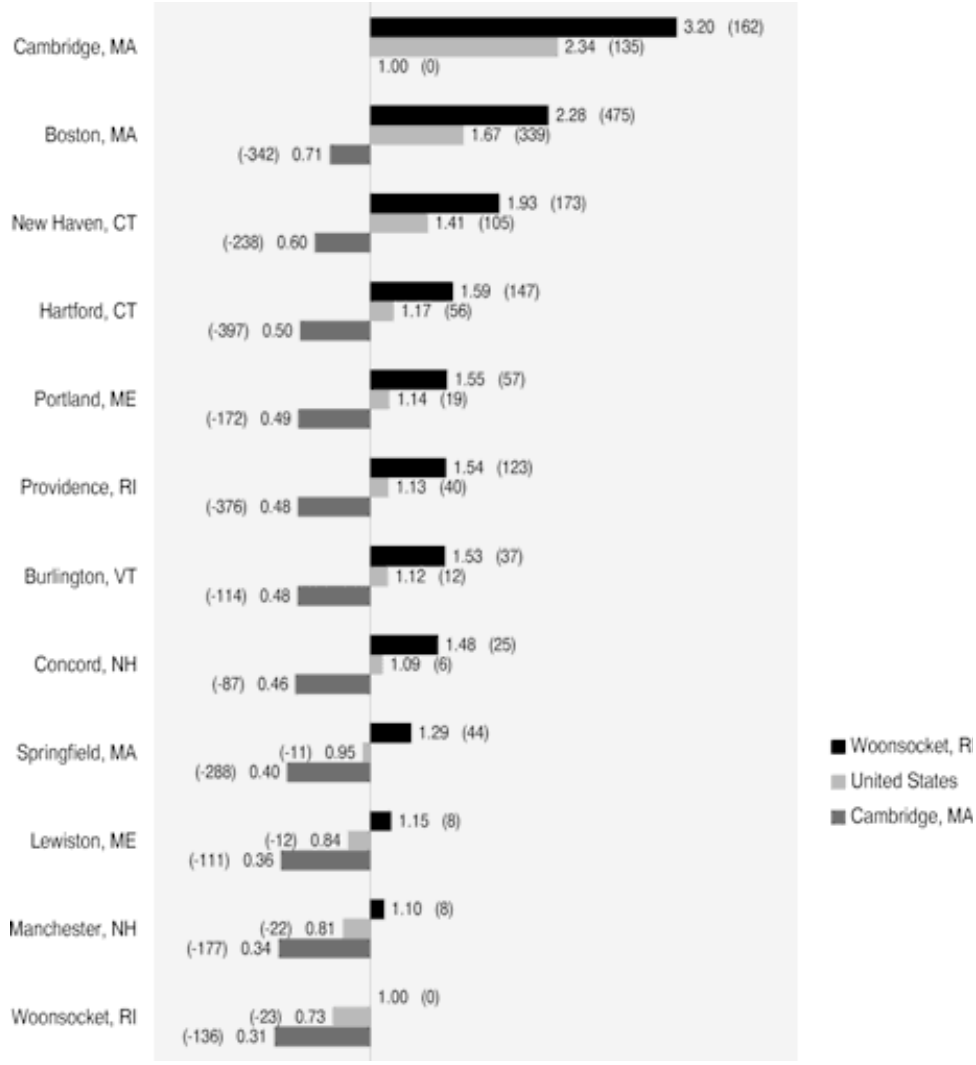


Figure 4.8. Primary Care Physicians Allocated to Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Areas (1993)

The figure gives the ratio of primary care physicians in selected hospital service areas to the lowest and highest ranked areas. It also compares the areas to the U.S. average. The number of primary care physicians above (+) or below (-) the number predicted by the experience in the benchmark area in 1993 is in parentheses. For example, the number of primary care physicians per 100,000 allocated to the residents of Cambridge, Massachusetts, was 3.2 times higher than Woonsocket, Rhode Island. If the level of primary care physicians of the 1993 Woonsocket benchmark had been attained for the residents of Cambridge, 162 fewer primary care physicians would have been needed.

Benchmarking: Primary Care Physicians

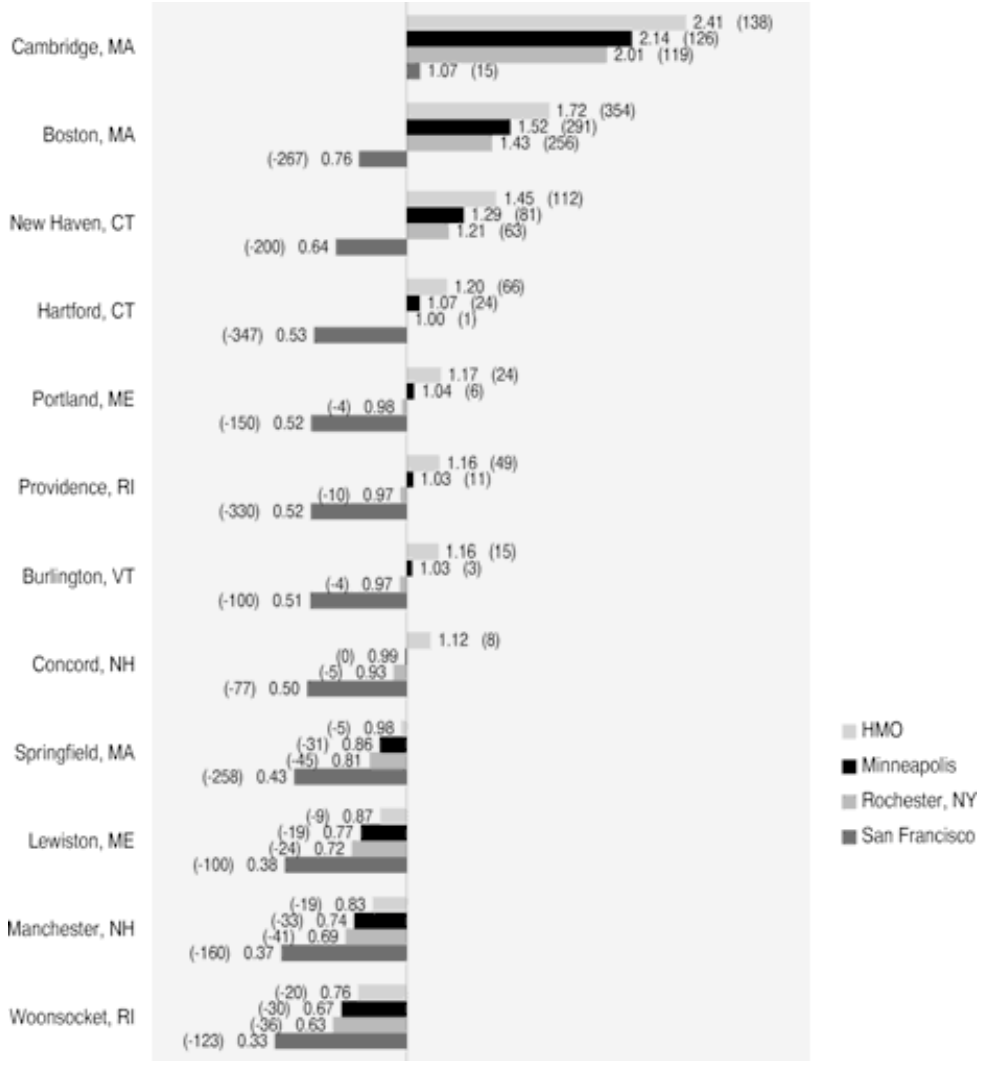


Figure 4.9. Primary Care Physicians Allocated to Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. and to a Large HMO (1993)

The figure gives the ratio of primary care physicians in selected hospital service areas in the New England States to other areas and to a large health maintenance organization. The number of primary care physicians above (+) or below (-) the number predicted by the experience in the benchmark area is in parentheses. For example, the number of primary care physicians per 100,000 allocated to the residents of Cambridge, Massachusetts, was 2.41 times higher than to the population of the health maintenance organization. If the workforce level of the 1993 health maintenance organization benchmark had been attained for the residents of Cambridge, 138 fewer primary care physicians would have been needed. If the San Francisco benchmark had applied, 15 fewer primary care physicians would have been needed.

TABLE 4 All rates are age and sex adjusted and corrected for out of area use. See Part Nine of the national volume of the Dartmouth Atlas of Health Care for details.

The count of primary physicians added to the count of specialists does not equal the count for all physicians; the difference (about 1% nationally) is attributable to the count of those in the "All Physician" category whose specialty areas were "unspecified."

Hospital service areas with populations of 5,000 or fewer residents are omitted from the figures and maps. In the table, the data for these areas are in parentheses.

The estimates for the staffing patterns of the large health maintenance organization have been adjusted using a .10 adjustment for out-of-plan use and .04 for low Medicaid numbers; i.e., multiplied by a factor of 1.14.
(Weiner JP. Forecasting the Effects of Health Reform on U.S. Physician Workforce Requirement. JAMA. 1994;272:222-239)

TABLE 4

Physicians in Active Practice Serving Residents of Hospital Service Areas (Physicians per 100,000 population, 1993)

Hospital Service Area	Resident Population	All Physicians	Primary Care Physicians	Specialists
Connecticut				
Bridgeport	299,628	204.4	67.2	135.9
Bristol	76,599	167.3	44.0	121.5
Danbury	159,854	207.5	58.1	148.7
Derby	89,022	195.8	59.6	135.3
Greenwich	58,506	283.4	80.1	200.4
Hartford	511,789	250.6	77.0	171.2
Manchester	85,015	184.8	64.6	119.5
Meriden	100,279	198.7	64.0	133.1
Middletown	158,987	214.1	73.1	138.9
Milford	49,940	193.8	63.7	129.0
New Britain	109,594	207.1	62.6	141.9
New Haven	386,607	291.5	93.1	194.8
New London	154,948	213.8	66.4	145.7
New Milford	43,274	222.0	79.5	140.2
Norwalk	145,346	270.7	80.0	189.7
Norwich	70,355	210.7	50.0	158.0
Putnam	67,281	174.6	64.2	109.8
Rockville	52,009	166.4	51.7	114.1
Sharon	38,423	273.2	106.8	165.2
Southington	38,591	172.2	62.5	108.7
Stafford Springs	72,350	167.0	58.0	107.3
Stamford	126,055	264.7	87.3	175.9
Torrington	56,737	191.8	49.1	139.3
Waterbury	255,132	208.0	69.7	136.7
Willimantic	75,325	189.5	64.6	124.4
Winsted	18,623	140.7	49.1	90.5
Maine				
Augusta	68,143	223.3	94.4	128.7
Bangor	121,418	154.0	53.9	99.6
Bar Harbor	9,698	212.6	90.8	121.4
Belfast	18,596	189.6	56.9	132.1
Biddeford	61,604	205.7	81.0	124.5
Blue Hill	8,522	279.2	111.5	167.3
Boothbay Harbor	5,640	341.0	150.0	190.7
Bridgton	14,858	236.5	102.3	133.8
Brunswick	69,003	202.1	82.3	119.5
Calais	14,450	186.0	92.6	93.1
Caribou	27,267	151.8	56.1	95.5
Damariscotta	9,152	232.0	91.6	139.9
Dover-Foxcroft	21,483	131.8	59.9	71.7
Ellsworth	21,025	207.1	103.4	103.4
Farmington	35,630	193.2	76.0	116.8
Fort Kent	13,563	191.8	78.0	113.2
Greenville	3,790	(143.9)	(61.0)	(82.6)
Houlton	18,053	156.5	76.0	80.3
Lewiston	112,342	179.5	55.6	122.4
Lincoln	14,280	153.3	74.7	78.2
Machias	15,962	196.9	95.2	101.4
Millinocket	12,843	143.2	71.6	71.4
Norway	25,007	182.5	71.2	110.9
Pittsfield	17,534	157.7	68.7	88.5
Portland	215,490	210.8	75.0	135.4
Presque Isle	28,392	153.0	46.7	106.1
Rockland	44,103	216.3	80.7	133.4
Rumford	16,930	217.9	72.9	144.3
Sanford	44,589	150.8	70.7	79.9
Skowhegan	29,758	215.3	98.1	116.7
Waterville	64,687	177.8	66.9	109.9
York	30,504	241.4	75.8	165.0
Massachusetts				
Arlington	73,533	410.0	133.8	274.5
Athol	23,913	179.9	80.3	95.0
Attleboro	102,110	171.3	57.7	112.9
Ayer	57,962	191.9	78.5	110.5
Beverly	111,015	216.1	64.3	151.1
Boston	768,694	331.1	110.1	217.8
Brockton	239,486	192.8	62.3	129.4
Burlington	23,093	169.7	53.7	115.2
Cambridge	152,358	443.1	154.6	284.7
Clinton	19,287	175.3	66.9	107.4
Concord	93,269	296.0	102.5	192.0
Everett	35,493	219.6	69.6	147.2
Fall River	161,355	172.0	55.7	115.8
Falmouth	66,543	276.6	85.7	185.0
Fitchburg	55,412	185.5	71.3	113.1
Gardner	50,090	139.7	49.7	89.5
Gloucester	36,198	203.9	67.3	135.9

Hospital Service Area	Resident Population	All Physicians	Primary Care Physicians	Specialists
Great Barrington	21,360	206.7	81.7	121.1
Greenfield	60,801	179.0	63.5	113.6
Haverhill	77,130	174.0	50.3	122.9
Holyoke	67,693	158.0	53.8	103.9
Hyannis	121,922	268.0	82.5	183.3
Lawrence	122,521	213.6	61.9	149.2
Leominster	38,145	179.8	71.4	106.3
Lowell	259,507	158.5	58.3	99.2
Ludlow	18,820	133.2	41.5	91.3
Lynn	96,347	200.3	57.2	142.2
Malden	54,114	236.8	75.1	157.2
Marlborough	52,180	172.7	59.3	111.2
Medford	57,338	272.7	99.2	171.2
Melrose	78,545	200.3	60.3	137.3
Methuen	65,410	192.1	64.4	125.4
Milton	25,558	313.0	90.7	218.9
Nantucket	6,012	196.4	61.9	133.7
Natick	210,485	273.0	86.8	183.8
Needham	27,576	413.3	123.1	283.7
New Bedford	163,683	141.9	37.7	103.7
Newburyport	63,370	176.5	61.5	114.3
Newton	83,348	465.8	130.9	328.4
Norfolk	40,393	125.1	40.7	83.5
North Adams	39,439	205.2	65.4	137.2
Northampton	101,922	275.2	106.9	167.3
Norwood	110,164	286.1	85.4	198.5
Oak Bluffs	11,541	269.0	96.9	170.4
Palmer	20,397	171.3	63.9	107.0
Pittsfield	100,989	211.8	65.8	144.8
Plymouth	81,544	176.7	55.1	120.8
Quincy	67,250	314.2	103.7	207.7
Salem	118,948	235.6	77.5	156.9
Somerville	76,393	307.8	112.9	192.2
South Weymouth	215,427	231.1	77.7	152.0
Southbridge	41,352	160.6	54.8	105.3
Springfield	312,914	191.6	62.5	128.4
Stoneham	22,147	230.9	71.2	157.6
Stoughton	26,777	204.0	62.7	139.4
Taunton	95,195	167.6	56.3	110.8
Waltham	68,092	377.4	112.8	260.5
Ware	31,070	170.8	65.5	104.9
Wareham	25,767	193.9	56.8	136.2
Webster	25,736	186.9	66.9	119.3
Westfield	53,368	141.8	47.7	93.7
Winchester	108,572	237.9	71.8	165.1
Winthrop	18,907	247.5	75.7	169.5
Worcester	405,867	240.7	92.2	147.1

Hospital Service Area	Resident Population	All Physicians	Primary Care Physicians	Specialists
New Hampshire				
Berlin	17,855	215.1	64.0	150.3
Claremont	22,069	202.1	74.6	126.6
Colebrook	6,633	150.5	51.2	99.0
Concord	105,055	210.7	71.8	137.8
Derry	47,907	106.9	39.5	66.2
Dover	74,625	175.3	55.6	119.5
Exeter	79,010	188.6	68.2	119.9
Franklin	23,078	150.2	69.3	80.5
Keene	55,756	174.8	61.6	112.7
Laconia	43,292	210.9	67.2	143.2
Lancaster	13,428	212.9	96.4	116.1
Lebanon	61,167	230.0	70.7	157.5
Littleton	14,253	189.4	70.9	118.1
Manchester	174,345	161.2	53.2	107.4
Nashua	163,513	177.4	57.1	119.6
New London	22,944	251.3	117.6	132.9
North Conway	14,058	217.0	78.6	138.0
Peterborough	33,448	190.7	69.9	120.4
Plymouth	17,010	167.3	52.8	114.1
Portsmouth	35,135	246.4	65.8	178.7
Rochester	42,504	139.4	44.5	94.7
Wolfeboro	18,800	225.8	68.0	157.2
Woodsville	13,878	269.8	121.3	147.3
Rhode Island				
Newport	69,543	205.1	83.2	121.6
Pawtucket	89,835	179.0	58.8	117.9
Providence	469,499	221.9	74.6	145.2
Wakefield	56,533	170.3	62.8	107.0
Warwick	187,117	209.1	69.4	138.0
Westerly	49,390	183.0	68.3	114.0
Woonsocket	127,734	139.1	48.4	88.1
Vermont				
Bennington	48,768	211.5	92.1	117.3
Berlin	61,594	203.8	79.2	124.2
Brattleboro	29,089	198.9	67.4	131.1
Burlington	142,306	198.4	74.3	122.9
Middlebury	27,976	222.5	98.4	123.5
Morrisville	22,493	236.0	105.0	130.5
Newport	23,298	177.9	62.0	115.4
Randolph	17,561	180.0	82.7	96.7
Rutland	64,801	193.5	66.6	125.2
Springfield	29,187	247.6	98.1	145.9
St Albans	38,242	200.1	84.1	110.5
St Johnsbury	24,303	177.6	65.7	111.5
Townshend	4,115	(169.1)	(77.9)	(90.5)
Windsor	8,165	165.9	57.8	107.2

Part Five

The Utilization of Hospitals for Medical and Surgical Conditions

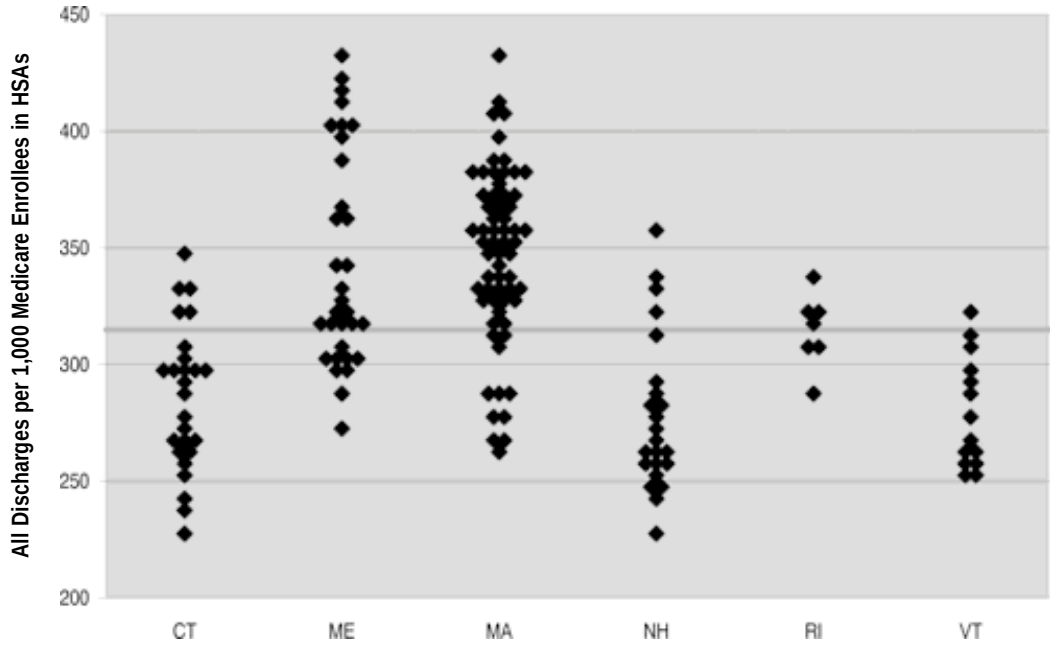
This section of the Atlas provides overall measures of the use of hospitals for medical and surgical discharges, as well as procedure rates for selected conditions.

As described in Part Two of the national volume of the Dartmouth Atlas of Health Care, variations in the rates of use of hospitals for medical discharges are closely related to the capacity of the hospital industry in local and regional markets. Supply-related variations in the use of specific surgical procedures, while linked to the quantity of resources, also reflect scientific uncertainty about the outcomes of alternative ways of treating common conditions — whether to treat coronary artery disease medically or surgically, for example. These variations also reflect a common failure to adequately involve patients in making decisions about treatment choices. Part Six of the national volume of the Atlas discusses these sources of variation in more detail to raise the question “Which rate is right?” The wide variations in surgical procedure rates in the region make clear the relevance of the question for the New England States.

This section of the Atlas is based on data from the Medicare program for 1992-93.

Total Medicare Discharges

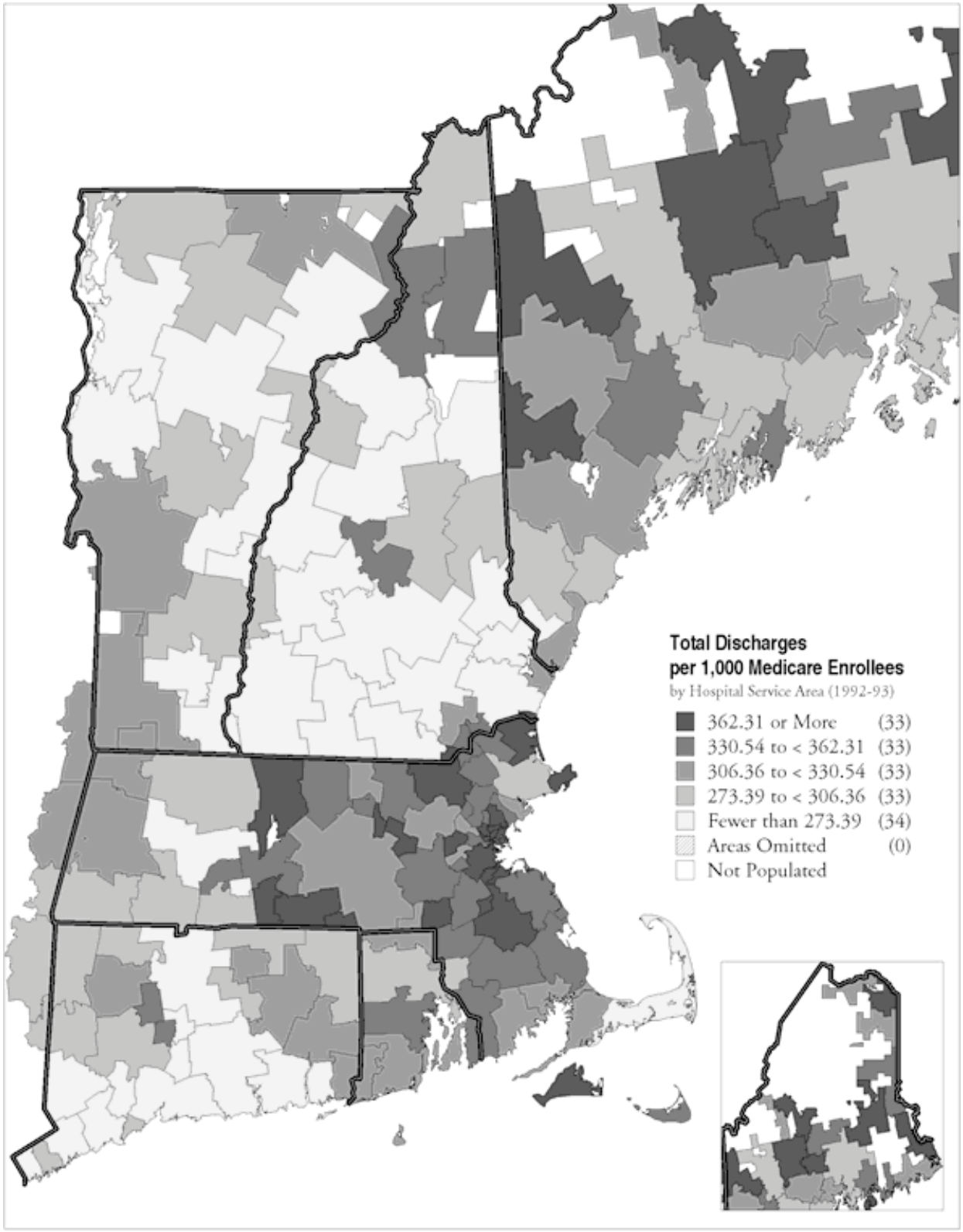
There was substantial variation in hospital discharges among Medicare patients in the New England States; rates in Connecticut, New Hampshire, Rhode Island and Vermont were all lower, on average, than in Maine and Massachusetts. There were several hospital service areas in Massachusetts, and several in Maine, with total discharges at least 20% higher than the national average of 315 per thousand Medicare enrollees. Boston, with 371, was 18% higher than the national average; Portland, Maine (318) was near it; and Providence, Rhode Island (287); Manchester, New Hampshire (262); Burlington, Vermont (253); and New Haven, Connecticut (236) were well below it.



The New England States. The gray horizontal line represents the United States average.

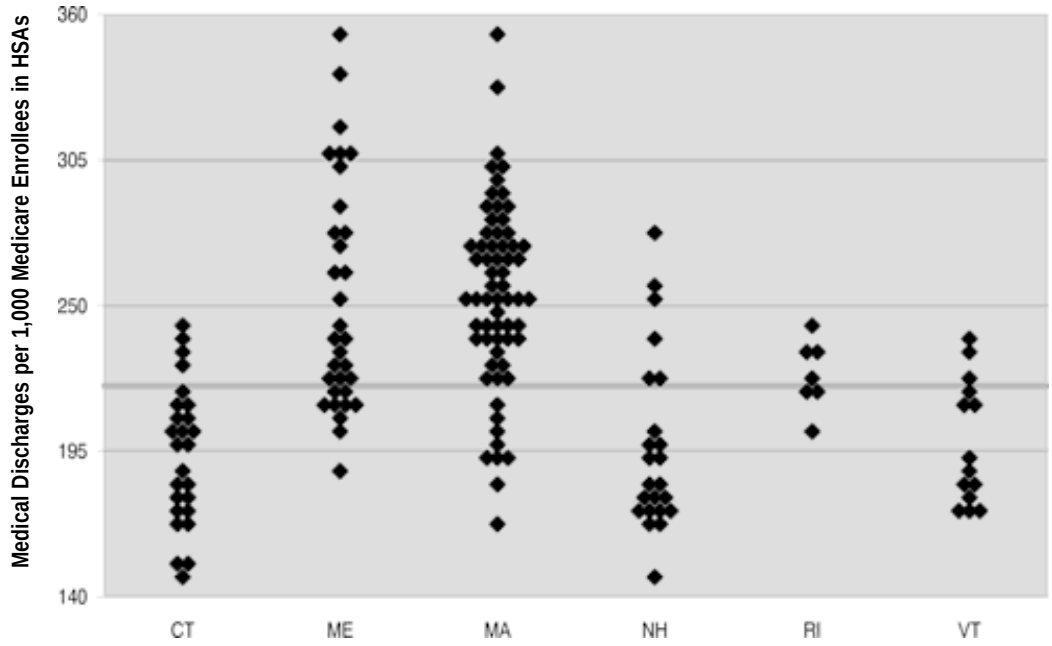
Figure 5.1. All Discharges per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

The number of discharges per thousand Medicare enrollees ranged from fewer than 230 to more than 425. Each point represents one hospital service area.


Total Discharges
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
362.31 or More (33)
330.54 to < 362.31 (33)
306.36 to < 330.54 (33)
273.39 to < 306.36 (33)
Fewer than 273.39 (34)
Areas Omitted (0)
Not Populated

Medicare Discharges for Medical Conditions

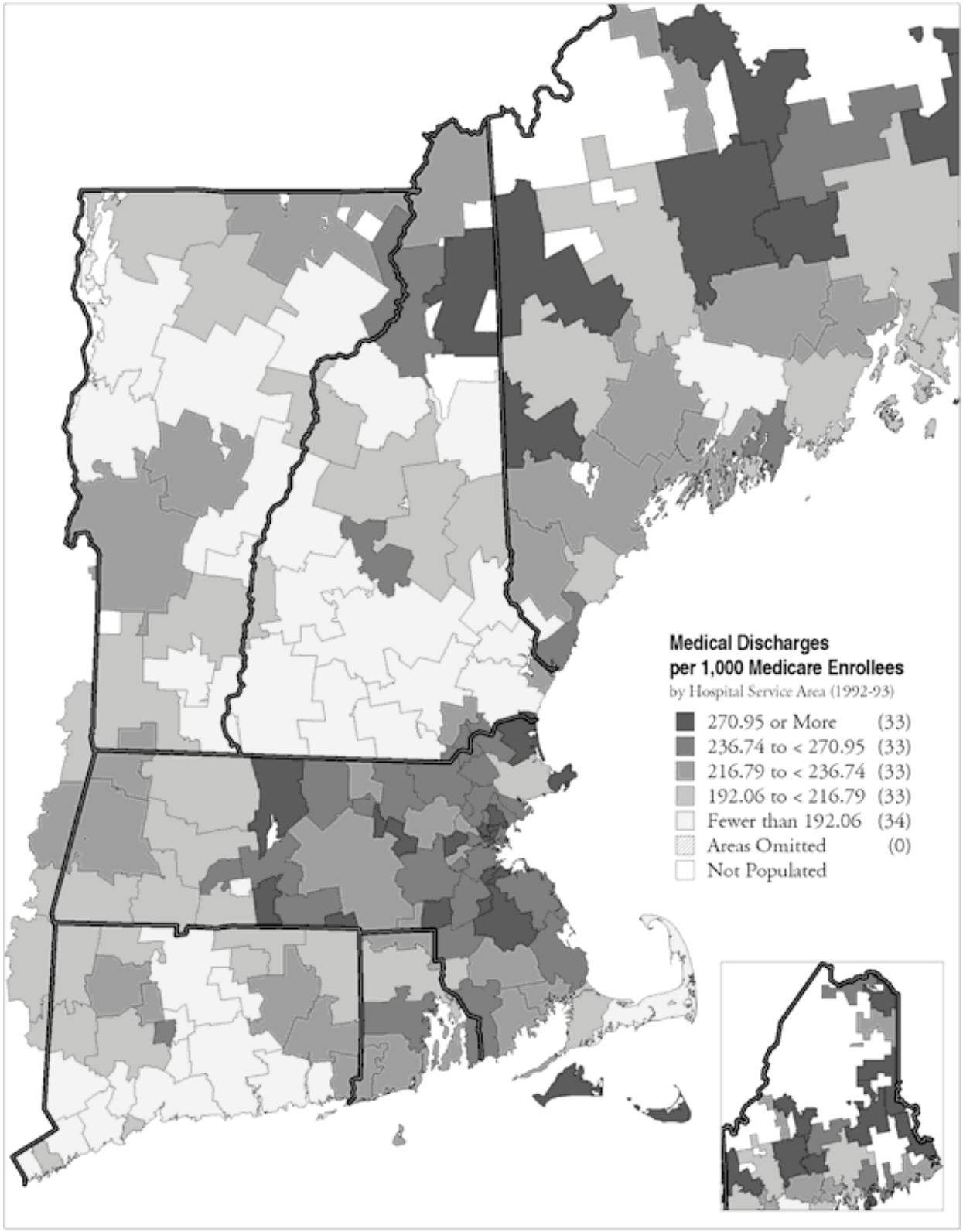
The rates of use of hospitals for the treatment of medical conditions among the Medicare population were generally higher in Maine and Massachusetts than in Connecticut, Rhode Island, and Vermont. Both Connecticut and Vermont had more hospital service areas below the national average number of medical discharges than above it. Boston (271) was 23% above the national average of 220. Portland, Maine (223), was near the national average; Providence, Rhode Island (201); Manchester, New Hampshire (176); Burlington, Vermont (173); and New Haven, Connecticut (152) were from 9% to 31% below it.



The New England States. The gray horizontal line represents the United States average.

Figure 5.2. Medical Discharges per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

The number of discharges for medical conditions per thousand Medicare enrollees ranged from fewer than 150 to more than 350. Each point represents one hospital service area.


Medical Discharges
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
270.95 or More (33)
236.74 to < 270.95 (33)
216.79 to < 236.74 (33)
192.06 to < 216.79 (33)
Fewer than 192.06 (34)
Areas Omitted (0)
Not Populated

Medicare Discharges for Surgical Procedures

Rates of discharges for surgical procedures showed much less variation than for medical conditions. In general, the rates of surgical discharges were lower in New Hampshire, Rhode Island, and particularly in Vermont, than in the rest of New England, and most hospital service areas in the three states were below the national average. The Boston hospital service area (100) was slightly higher than the national average of 95 surgical discharges per thousand Medicare enrollees; Portland, Maine (94); Manchester, New Hampshire (86); Providence, Rhode Island (86); New Haven, Connecticut (84); and Burlington, Vermont (81), were from 1% to 15% below the national average.

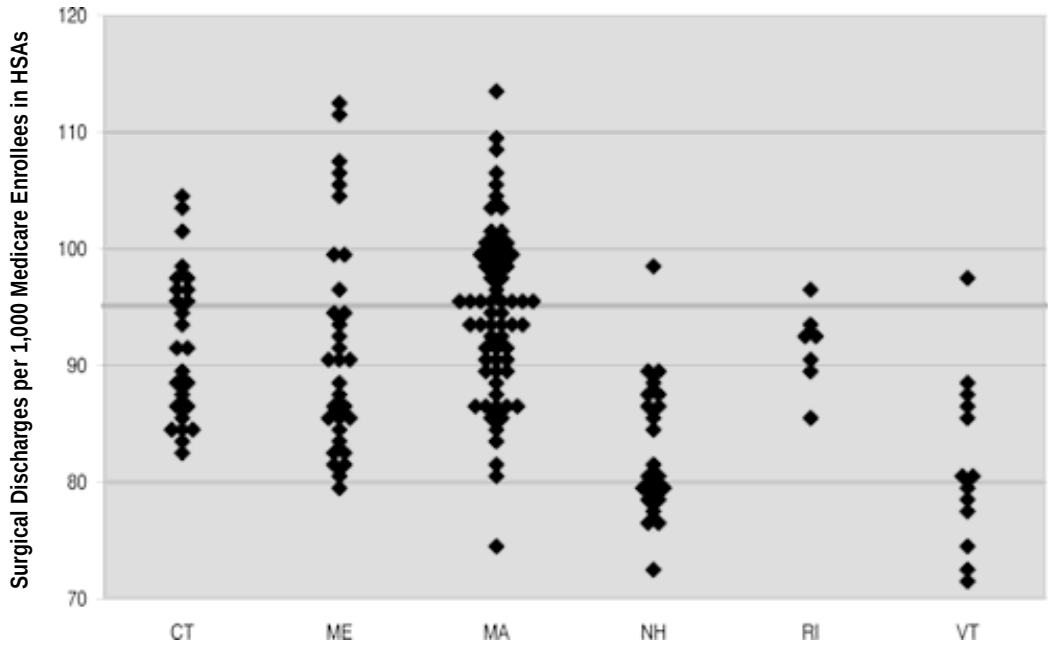
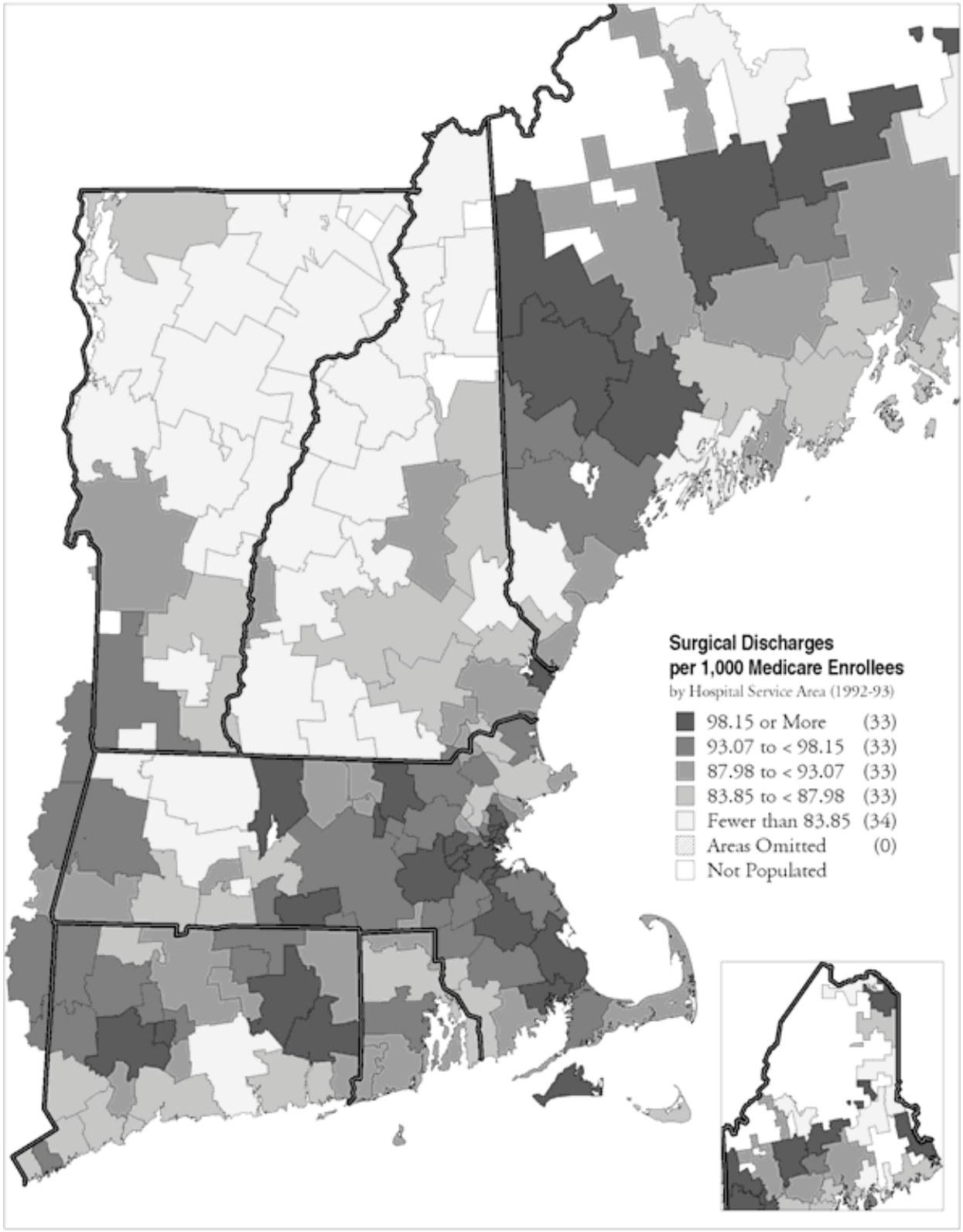


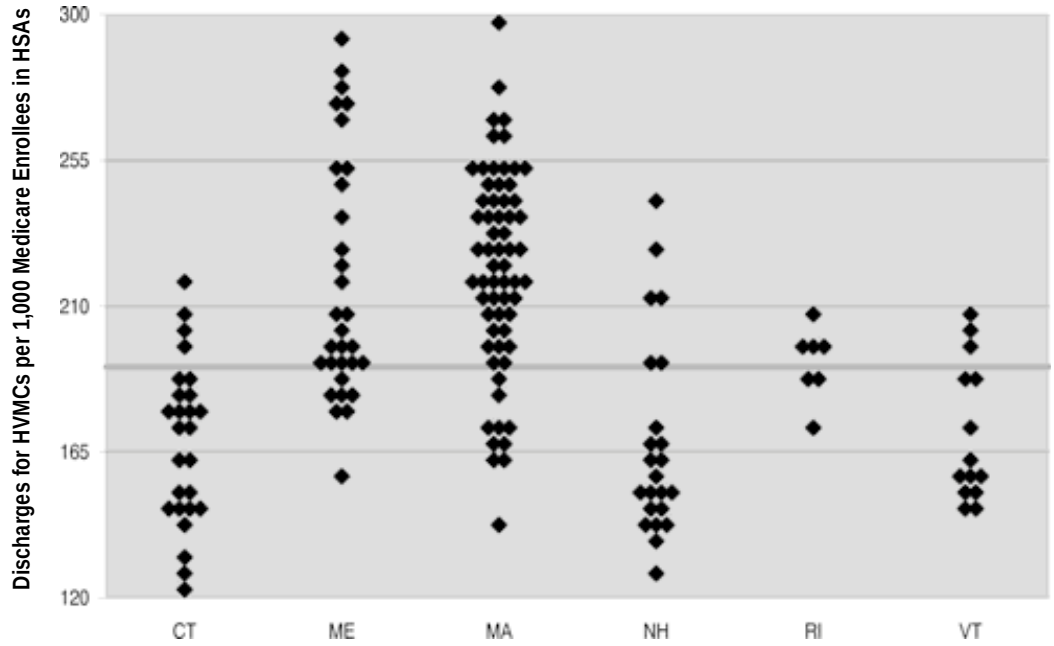
Figure 5.3. Surgical Discharges per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

The number of surgical discharges per thousand Medicare enrollees ranged from fewer than 70 to more than 110. Each point represents one hospital service area.


Surgical Discharges
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
98.15 or More (33)
93.07 to < 98.15 (33)
87.98 to < 93.07 (33)
83.85 to < 87.98 (33)
Fewer than 83.85 (34)
Areas Omitted (0)
Not Populated

Medicare Discharges for High Variation Medical Conditions

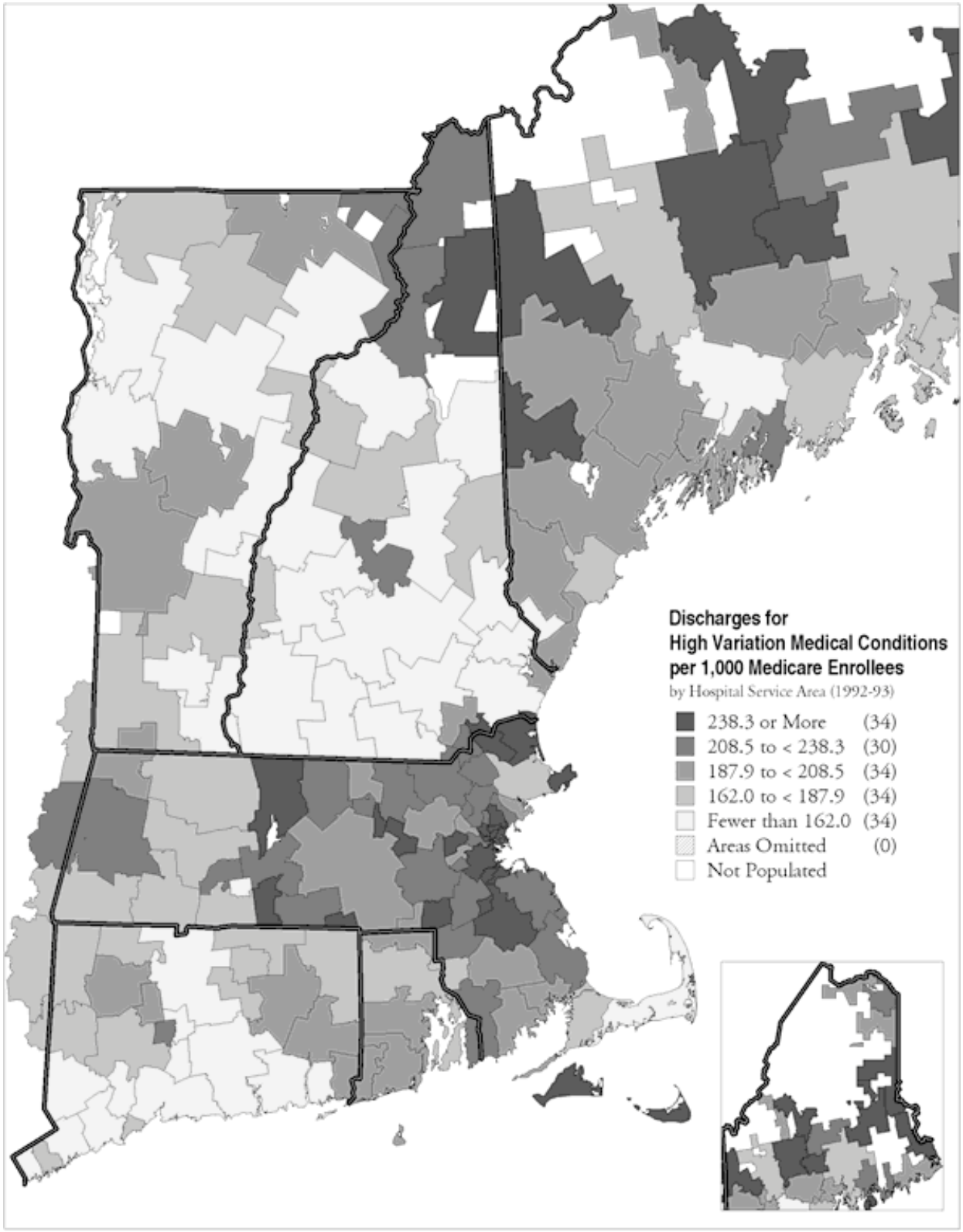
More than 80% of medical admissions are for the treatment of what have been described as "high variation medical conditions," including problems such as pneumonia, chronic obstructive pulmonary disease, gastroenteritis, and congestive heart failure. Residents of areas with higher hospital capacity experienced greater use of hospital care, particularly for high variation medical conditions. The Boston hospital service area, with 240 high variation medical condition discharges per thousand, had a rate 86% higher than New Haven (129); 63% higher than Burlington, Vermont (147); 57% higher than Manchester, New Hampshire (153); 39% higher than Providence, Rhode Island (173); and 20% higher than Portland, Maine (199).



The New England States. The gray horizontal line represents the United States average.

Figure 5.4. Discharges for High Variation Medical Conditions per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

Discharges for high variation medical conditions per thousand Medicare enrollees ranged from fewer than 125 to more than 280. Each point represents one hospital service area.


Discharges for
High Variation Medical Conditions
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
238.3 or More (34)
208.5 to < 238.3 (30)
187.9 to < 208.5 (34)
162.0 to < 187.9 (34)
Fewer than 162.0 (34)
Areas Omitted (0)
Not Populated

Contribution of Discharge Rate and Average Length of Stay to Patient Days of Hospitalization for High Variation Medical Conditions

As shown in Part Two of the national Atlas, the rates of hospitalization for high variation medical conditions in hospital service areas are closely associated with the numbers of beds per thousand residents. Greater numbers of available beds reduced the threshold for admission and re-admission. Although health services research has consistently shown that admission policies are more important than length of stay in determining aggregate hospital resource use, length of stay continues to be used as a measure of hospital efficiency. Figures 5.5 and 5.6 illustrate the importance of discharge rates as determinants of hospital use for high variation medical conditions. Most of the variation in bed use was associated with the decision to admit (as measured by discharge rate) rather than decisions on how long to keep patients in the hospital.

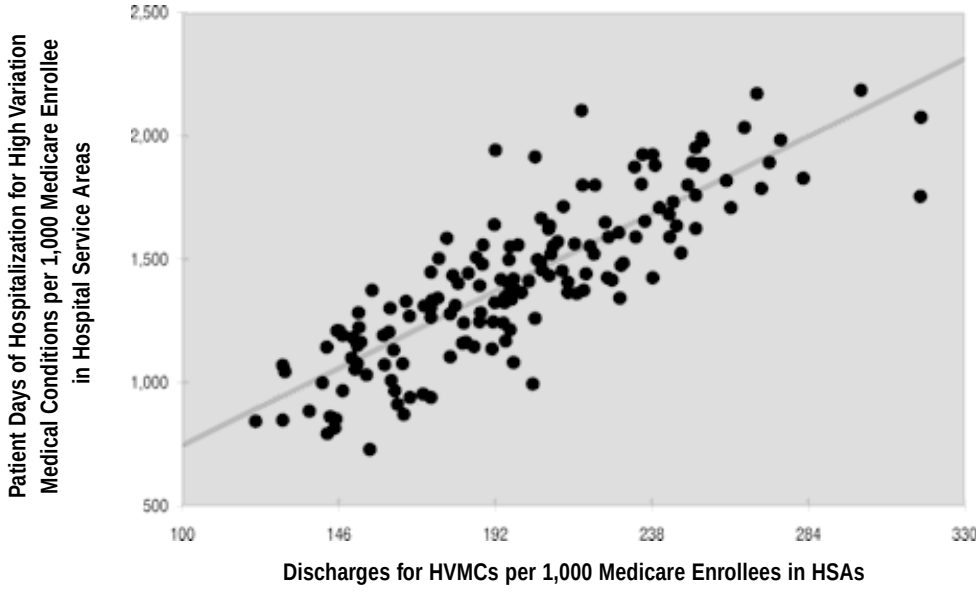


Figure 5.5. The Relationship Between Total Hospital Days and Discharge Rate for High Variation Medical Conditions in Hospital Service Areas in the New England States

Most of the variation in hospital days for high variation medical conditions among hospital service areas is associated with differences in discharge rates. (R^2=.71)

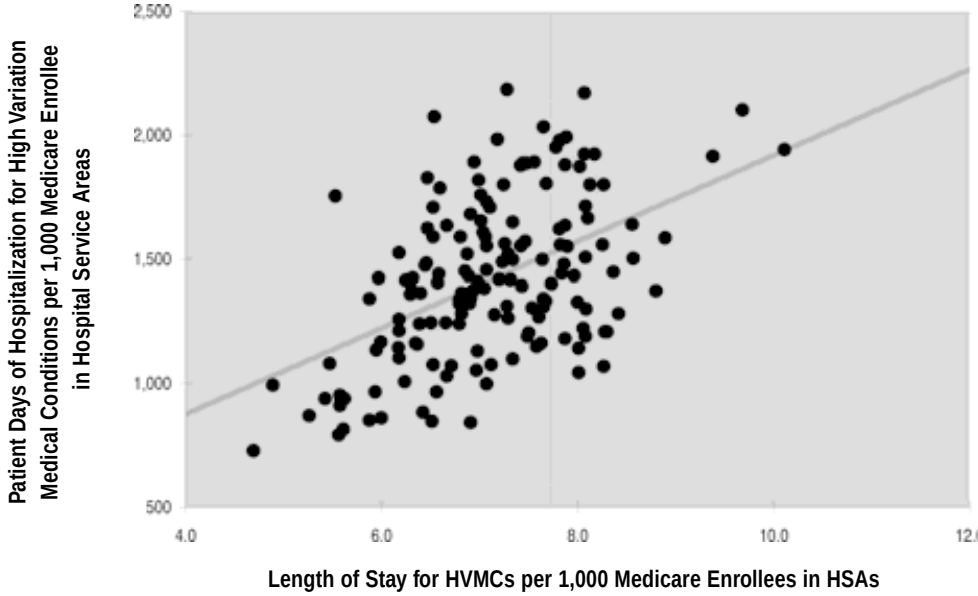


Figure 5.6. The Relationship Between Total Hospital Days and Average Length of Stay (in Days) for High Variation Medical Conditions in Hospital Service Areas in the New England States

The average length of stay explains less of the variation in bed use for high variation medical conditions among hospital service areas (R^2=.24) than does the area's discharge rate.

Benchmarking: Discharges for Surgical Procedures

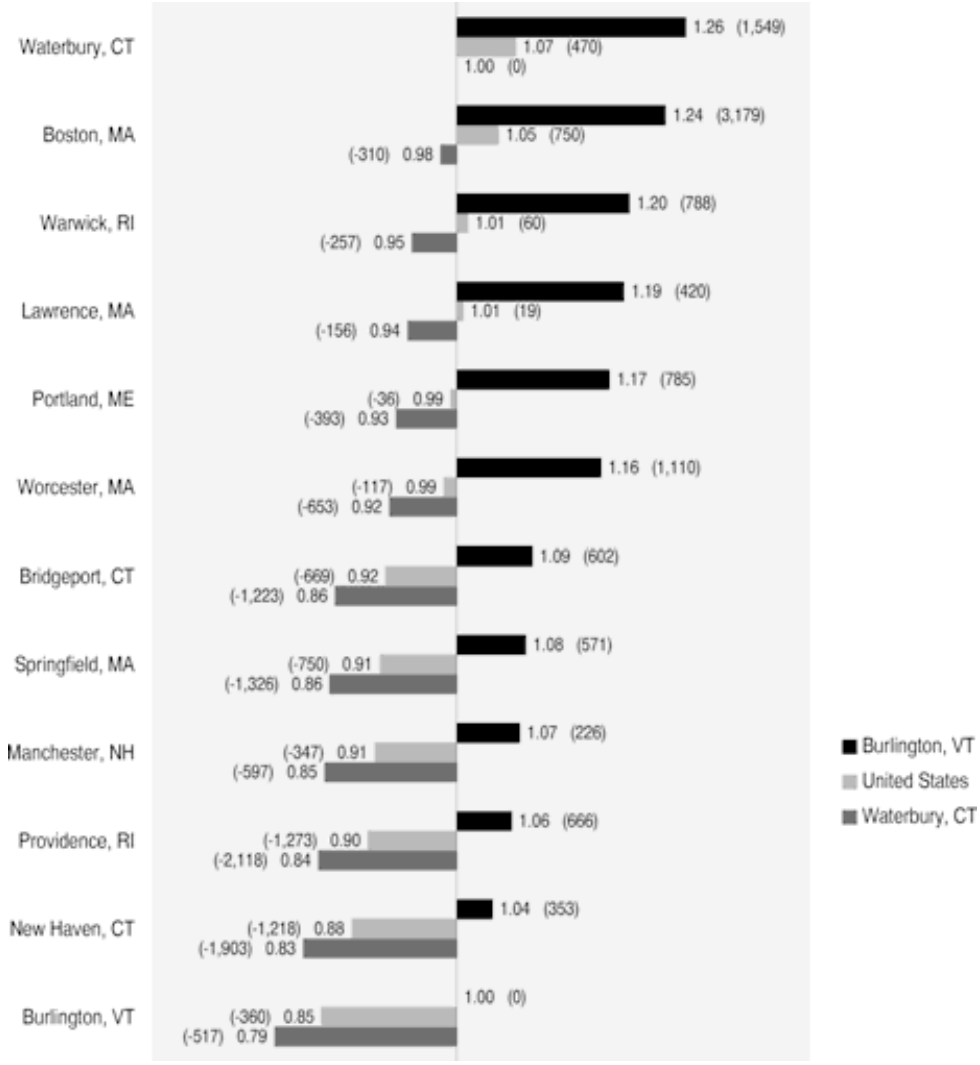


Figure 5.7. Discharges for Surgical Procedures per 1,000 Medicare Enrollees in Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Hospital Service Areas (1992-93)

The figure gives the ratio for surgical discharges in selected hospital service areas compared to the highest and lowest ranked areas. It also compares each selected service area to the U.S. average. The number of discharges above (+) or below (-) the number predicted by the experience in the benchmark area for 1992-93 is given in parentheses. For example, the surgical discharges per 1,000 Medicare enrollees living in Waterbury, Connecticut, was 1.26 times higher than for enrollees living in Burlington, Vermont. If the Burlington discharge rate had applied to the residents of Waterbury, 1,549 fewer hospitalizations would have occurred.

Benchmarking: Discharges for Surgical Procedures

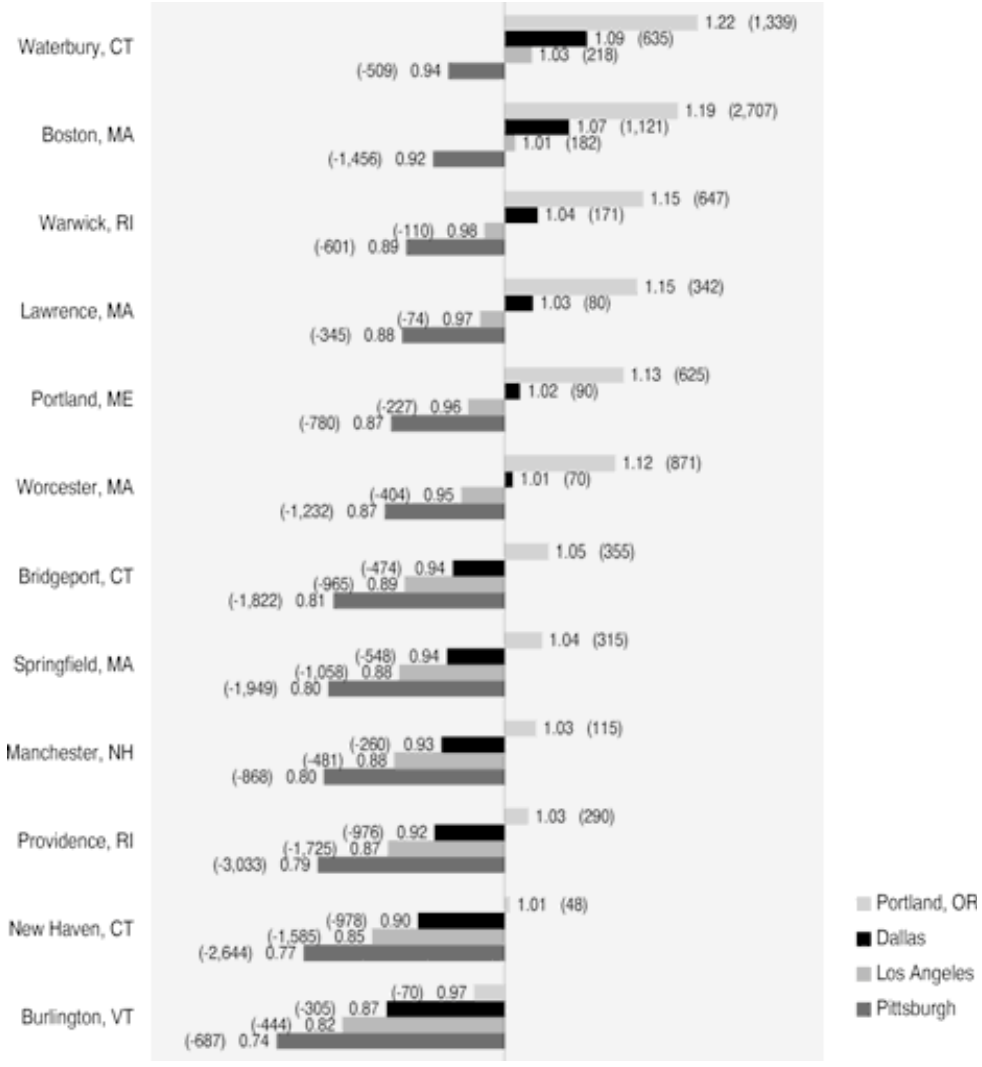


Figure 5.8. Discharges for Surgical Procedures per 1,000 Medicare Enrollees in Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1992-93)

The figure gives the ratio of discharges for surgical procedures in selected hospital service areas in the New England States, compared to other areas. The number of surgical discharges above (+) or below (-) the number predicted by the experience in the benchmark areas is in parentheses. For example, the surgical discharges per 1,000 Medicare enrollees living in Waterbury, Connecticut, was 1.22 times higher than for enrollees living in Portland, Oregon. If the Portland discharge rate had applied to residents of Waterbury, 1,339 fewer hospitalizations would have occurred. If the Pittsburgh benchmark had applied, there would have been 509 more discharges.

Benchmarking: Discharges for High Variation Medical Conditions

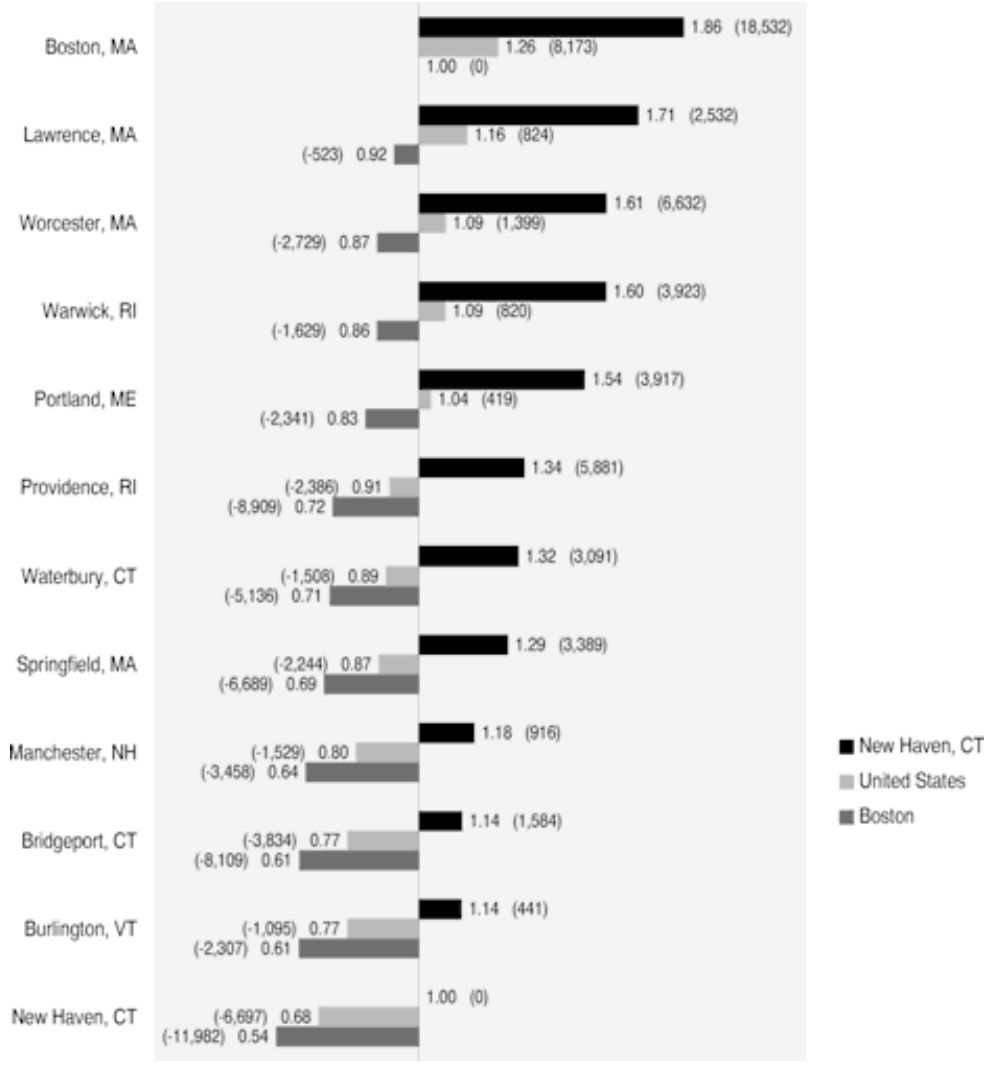


Figure 5.9. Discharges for High Variation Medical Conditions per 1,000 Medicare Enrollees in Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Hospital Service Areas (1992-93)

The figure gives the ratio of discharges for high variation medical conditions in selected hospital service areas compared to the highest and lowest ranked areas. It also compares each selected service area to the U.S. average. The number of discharges for high variation medical conditions above (+) or below (-) the number predicted by the experience in the benchmark area for 1992-93 is given in parentheses. For example, the number of discharges for high variation medical conditions per 1,000 Medicare enrollees living in Boston was 1.86 times higher than for enrollees living in New Haven, Connecticut. If the New Haven discharge rate had applied to the residents of Boston, 18,532 fewer discharges for high variation medical conditions would have occurred.

Benchmarking: High Variation Medical Conditions

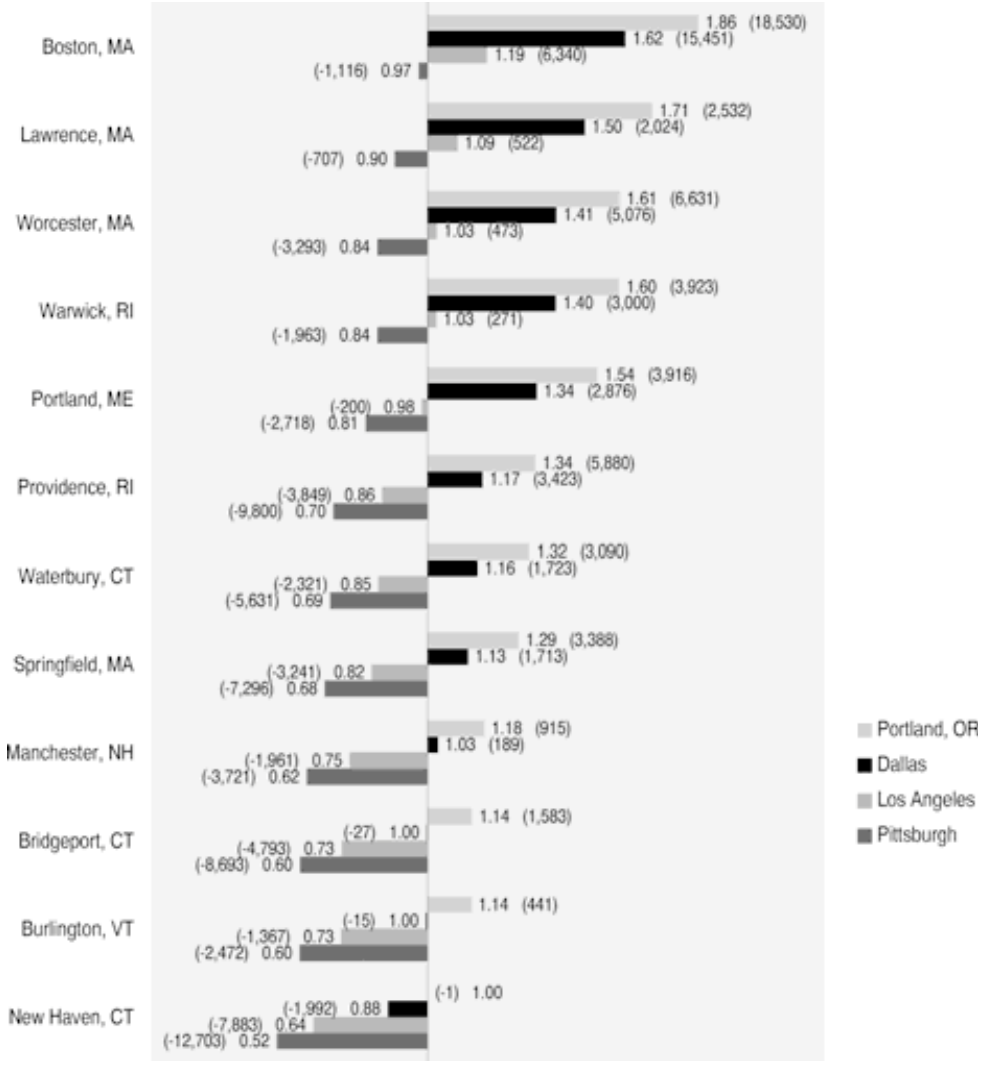
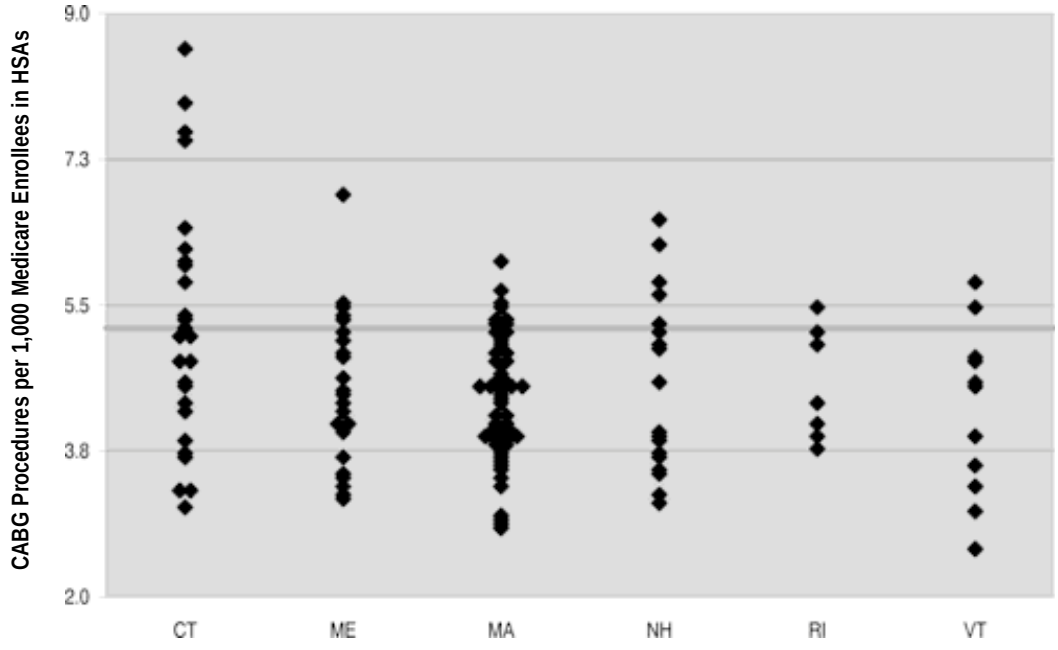


Figure 5.10. Discharges for High Variation Medical Conditions per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1992-93)

The figure gives the ratio of discharges for high variation medical conditions in selected hospital service areas in the New England States, compared to other areas. The number of discharges for high variation medical conditions above (+) or below (-) the number predicted by the experience in the benchmark areas is in parentheses. For example, the discharges for high variation medical conditions per 1,000 Medicare enrollees living in Boston was 1.86 times higher than for enrollees living in Portland, Oregon. If the Portland discharge rate had applied to residents of Boston, 18,530 fewer discharges for high variation medical conditions would have occurred. If the Pittsburgh benchmark had applied, there would have been 1,116 more discharges.

Coronary Artery Bypass Grafting

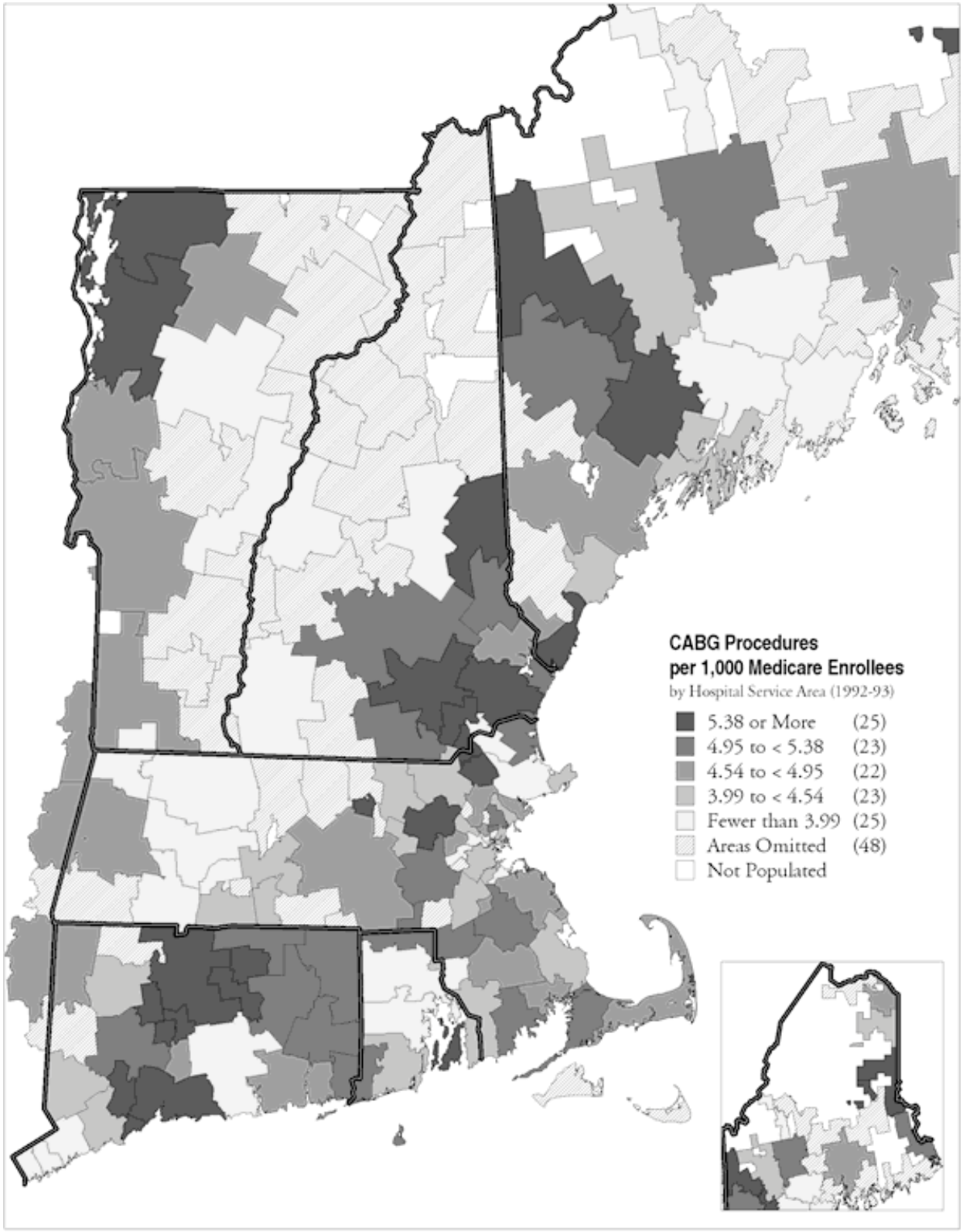
The rate of coronary artery bypass grafting surgery in Manchester, New Hampshire (6.2 procedures per thousand Medicare enrolleees) was 59% higher than in the Providence, Rhode Island, area (3.9). New Haven, Connecticut (6.0) had a rate 15% higher than the national average of 5.2, but other hospital service areas in Connecticut, including Manchester, Rockville, and Bristol, had rates substantially higher than New Haven's. The rate in Burlington, Vermont (5.8) was above the U.S. average; Portland, Maine (4.9) and Boston (4.0) had rates below it.



The New England States. The gray horizontal line represents the United States average.

Figure 5.11. Rates of Coronary Artery Bypass Grafting Procedures per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

Rates of coronary artery bypass grafting per thousand Medicare enrollees varied by a factor of more than 3, from fewer than 2.8 procedures to more than 8.5. Each point represents one hospital service area.


CABG Procedures
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
5.38 or More (25)
4.95 to < 5.38 (23)
4.54 to < 4.95 (22)
3.99 to < 4.54 (23)
Fewer than 3.99 (25)
Areas Omitted (48)
Not Populated

Percutaneous Transluminal Coronary Angioplasty

Angioplasty rates for Medicare enrollees of the New Haven, Connecticut hospital service area (6.2) were about twice as high as for Providence, Rhode Island (3.1), and 68% higher than for residents of Boston (3.7). Most areas of Massachusetts and New Hampshire had rates lower than the national average of 4.9 angioplasty procedures per thousand Medicare enrollees; Manchester, New Hampshire (5.0) was slightly higher, as was Brockton, Massachusetts (5.0). Portland, Maine (4.0) and Burlington, Vermont (3.8), were about 22% and 29% below the nation average, respectively. The variations in angioplasty and bypass surgery cannot be explained on the basis that one procedure was used as a substitute for the other. Angioplasty rates as well as bypass surgery were higher than the national average for residents of New Haven and lower than average for residents of Boston. Within the New England States, angioplasty rates were positively correlated with bypass surgery rates (R^2=.32)

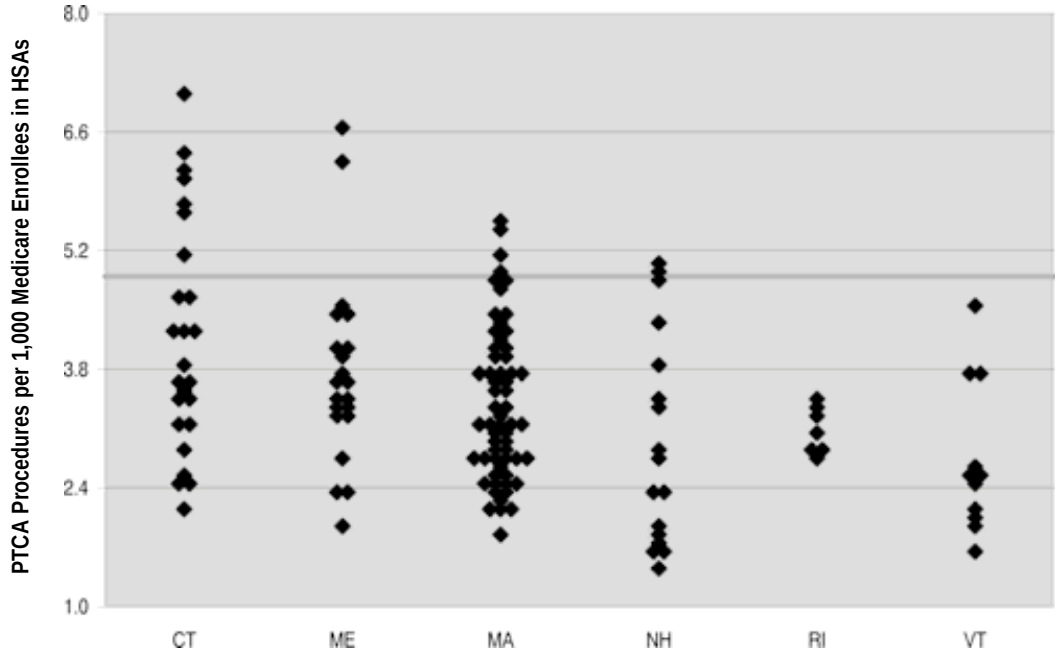
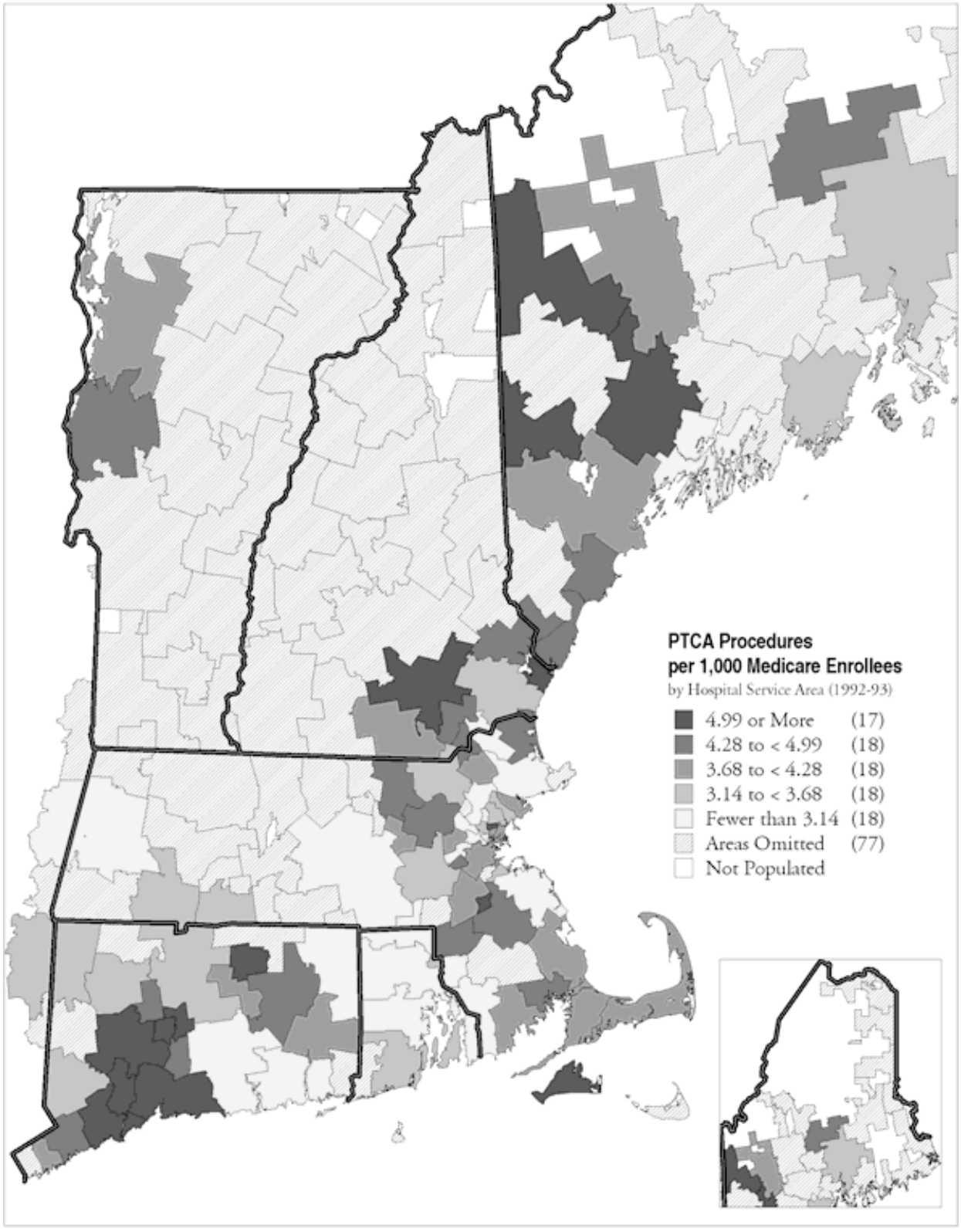


Figure 5.12. Rates of Percutaneous Transluminal Coronary Angioplasty Procedures per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

Rates of angioplasty varied by a factor of about 5, from fewer than 1.5 to more than 7.0. Each point represents one hospital service area.


PTCA Procedures
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
4.99 or More (17)
4.28 to < 4.99 (18)
3.68 to < 4.28 (18)
3.14 to < 3.68 (18)
Fewer than 3.14 (18)
Areas Omitted (77)
Not Populated

Coronary Angiography

Rates of coronary angiography varied substantially within the region. The hospital service area in Manchester, New Hampshire, with 20.0 angiographies per thousand Medicare enrollees, was almost twice as high as Providence, Rhode Island (10.8); Boston (13.1) was also lower than other large cities in New England in rates of angiography. Coronary angiography is an essential diagnostic step in the decision making process leading to the recommendation of CABG or PTCA procedures. In the New England States, hospital service areas that perform more diagnostic tests for coronary artery disease per thousand Medicare enrollees had higher rates of invasive treatment.

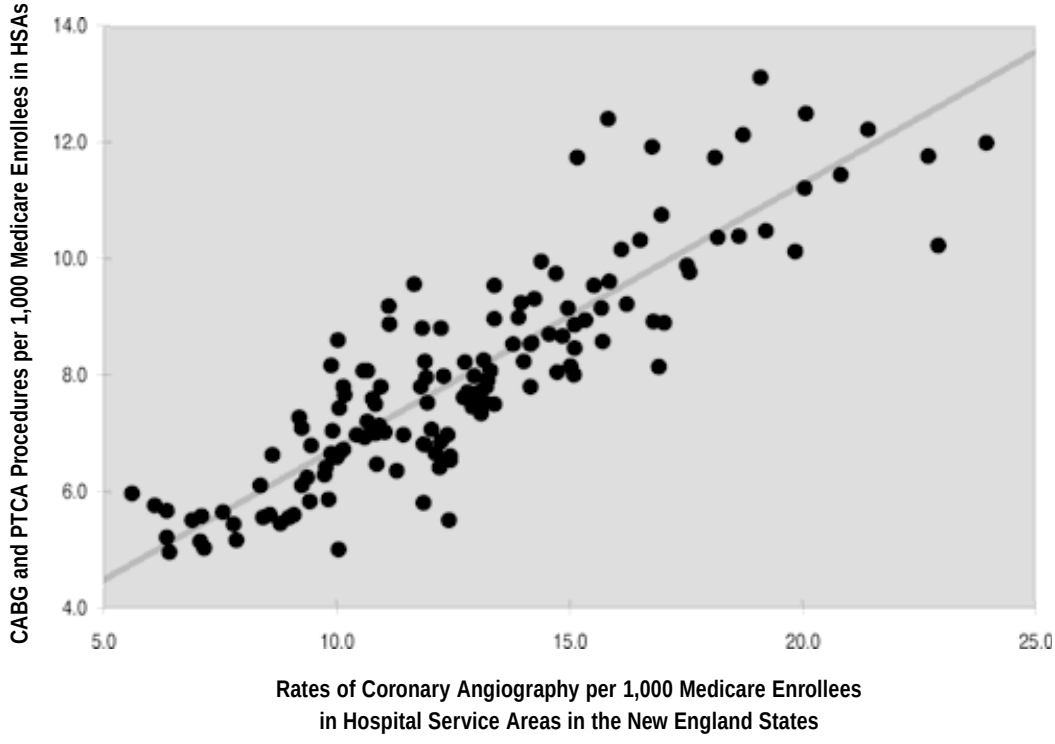
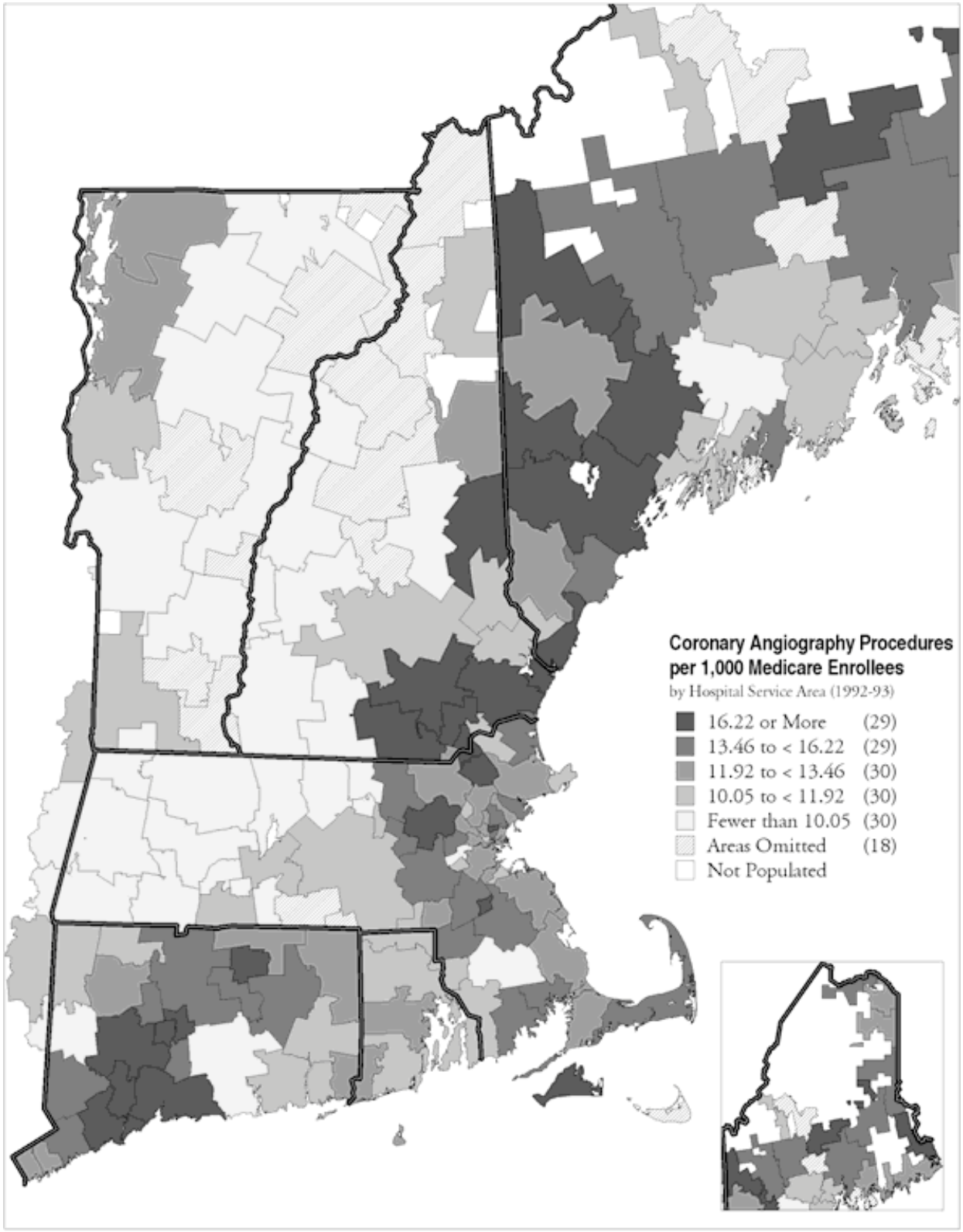


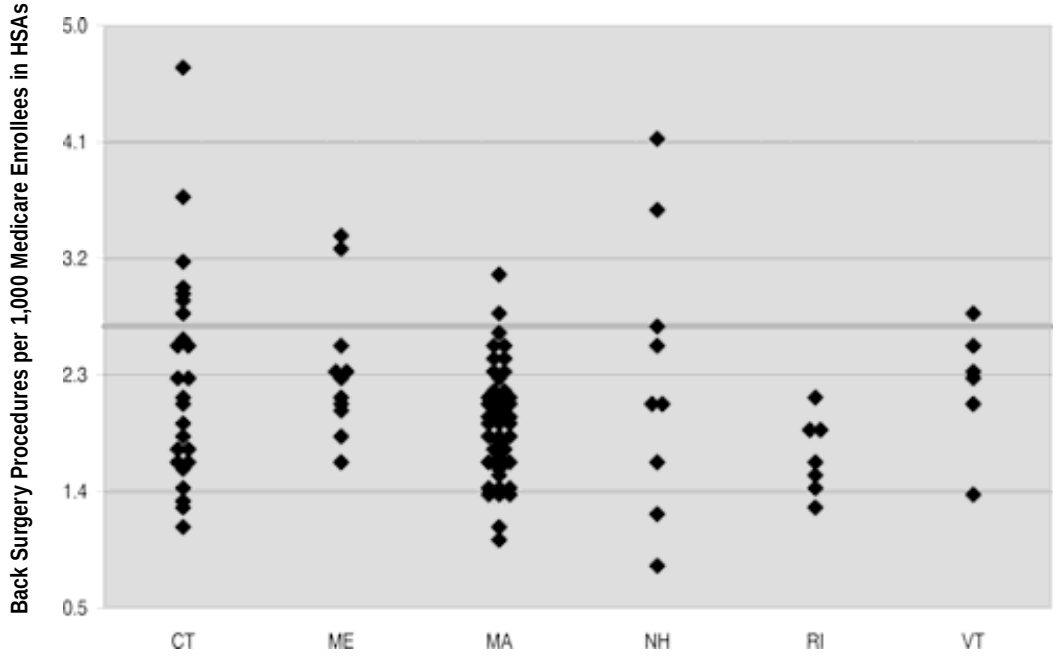
Figure 5.13. The Association Between Rates of Coronary Angiography and the Combined Rates of Coronary Artery Bypass Grafting and Coronary Angiography Procedures per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

The number of Medicare enrollees undergoing invasive cardiovascular procedures was closely linked with the rate of diagnostic testing (R^2 = .78)


Coronary Angiography Procedures
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
16.22 or More (29)
13.46 to < 16.22 (29)
11.92 to < 13.46 (30)
10.05 to < 11.92 (30)
Fewer than 10.05 (30)
Areas Omitted (18)
Not Populated

Back Surgery

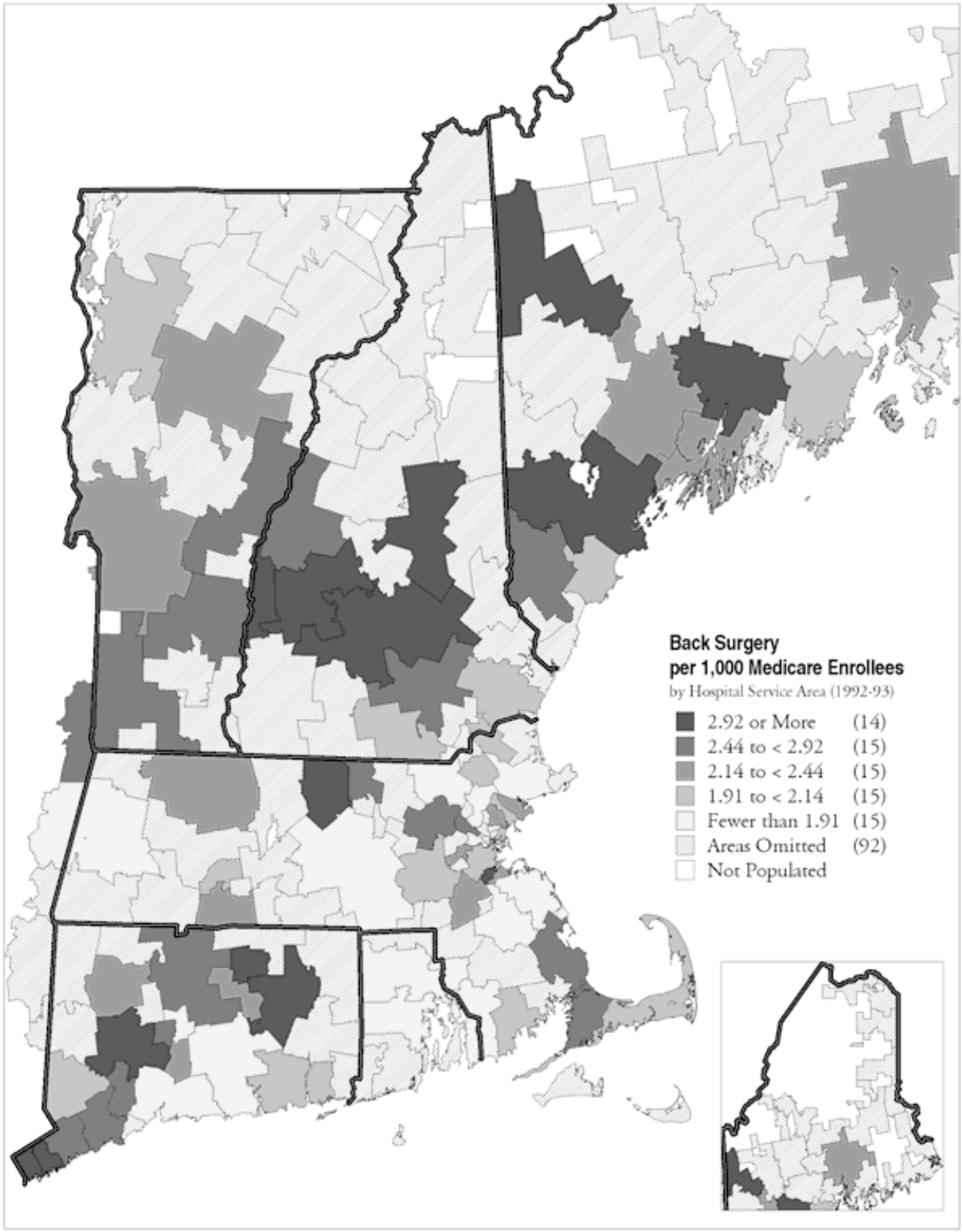
There was substantial variation among the New England States in back surgery rates. New Haven, Connecticut had a back surgery rate of 1.1 procedures per thousand Medicare enrollees, less than half the national rate and about a third the rate in Portland, Maine (3.3). Manchester, New Hampshire (2.5); Burlington, Vermont (2.1); Boston (2.0); and Providence, Rhode Island (1.6) were from 7% to 41% below the national average of 2.7.



The New England States. The gray horizontal line represents the United States average.

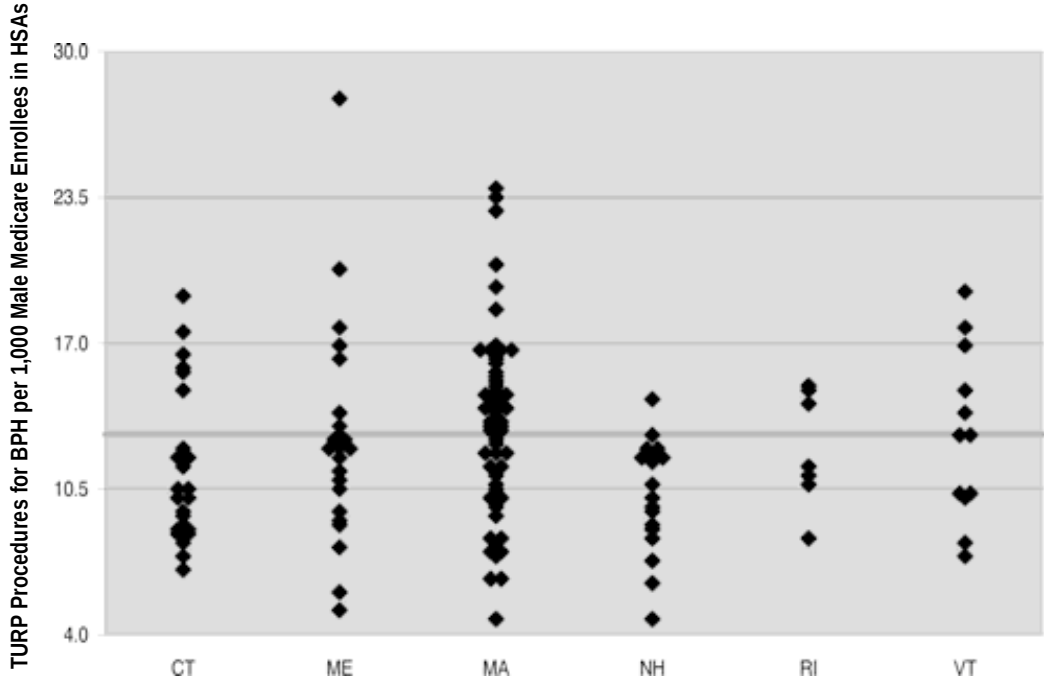
Figure 5.14. Rates of Back Surgery Procedures per 1,000 Medicare Enrollees in Hospital Service Areas in the New England States (1992-93)

Rates of back surgery varied from fewer than 1.0 to more than 4.5. Each point represents one hospital service area.


Back Surgery
per 1,000 Medicare Enrollees
by Hospital Service Area (1992-93)
2.92 or More (14)
2.44 to < 2.92 (15)
2.14 to < 2.44 (15)
1.91 to < 2.14 (15)
Fewer than 1.91 (15)
Areas Omitted (92)
Not Populated

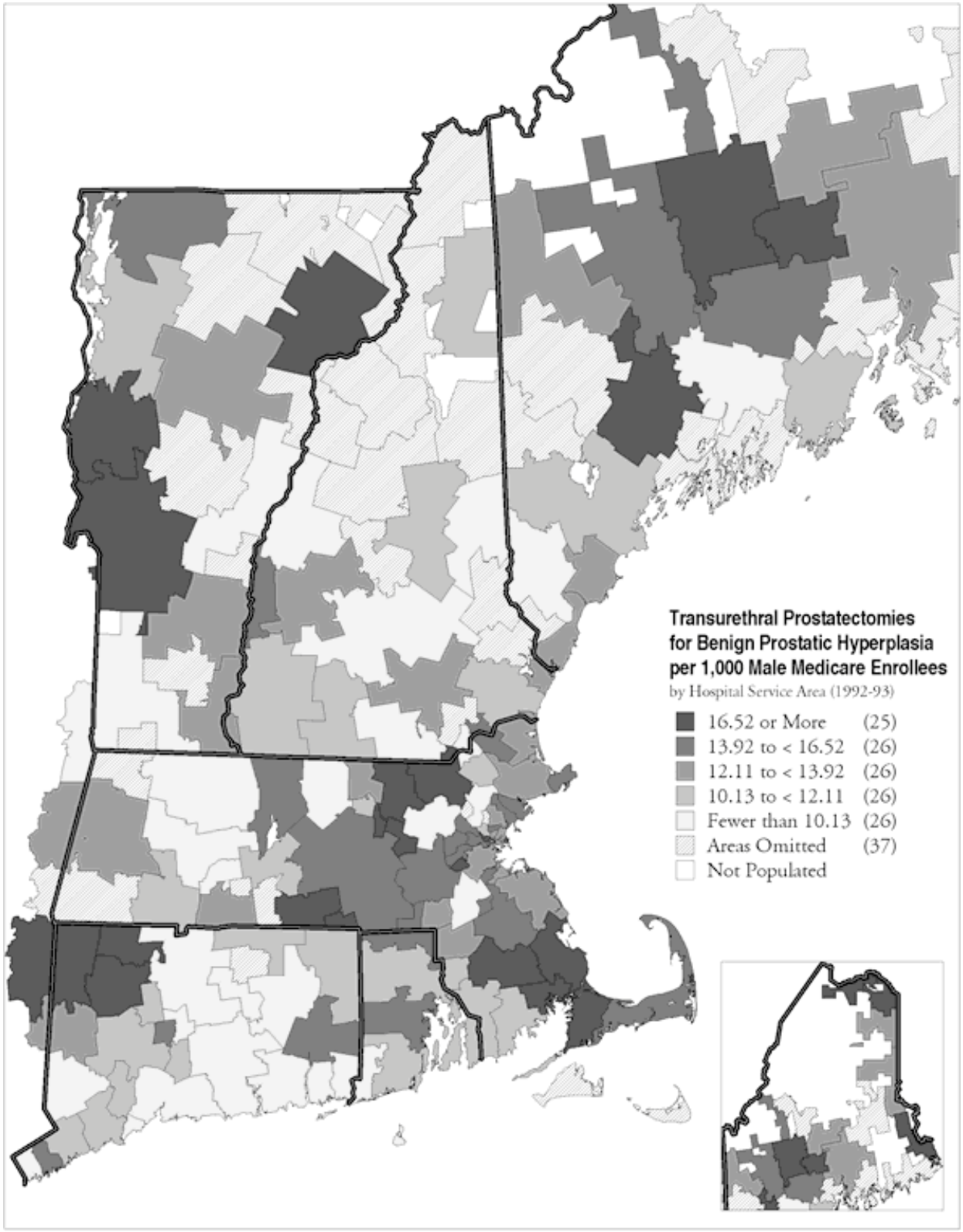
Transurethral Resection of the Prostate for Benign Prostatic Hyperplasia

The rate of TURP for BPH per thousand male Medicare enrollees in the Boston hospital service area (13.5) was more than 90% higher than the rate in New Haven (7.0). Six Massachusetts hospital service areas had rates higher than 20 per 1,000 male Medicare enrollees. New Hampshire's hospital service areas generally performed the procedure much less frequently. Manchester, New Hampshire (12.2); Providence, Rhode Island (11.6); Portland, Maine (10.9); and Burlington, Vermont (10.3) all had rates lower than the national average of 12.9.



The New England States. The gray horizontal line represents the United States average.

Figure 5.15. Rates of Transurethral Resection of the Prostate for Benign Prostatic Hyperplasia per 1,000 Male Medicare Enrollees Allocated to Hospital Service Areas in the New England States (1992-93)
Rates of transurethral resection of the prostate per thousand male Medicare enrollees varied by a factor of almost 10, from fewer than 5 to more than 44. Each point represents one hospital service area.


Transurethral Prostatectomies
for Benign Prostatic Hyperplasia
per 1,000 Male Medicare Enrollees
by Hospital Service Area (1992-93)
16.52 or More (25)
13.92 to < 16.52 (26)
12.11 to < 13.92 (26)
10.13 to < 12.11 (26)
Fewer than 10.13 (26)
Areas Omitted (37)
Not Populated

Benchmarking: CABG Procedures

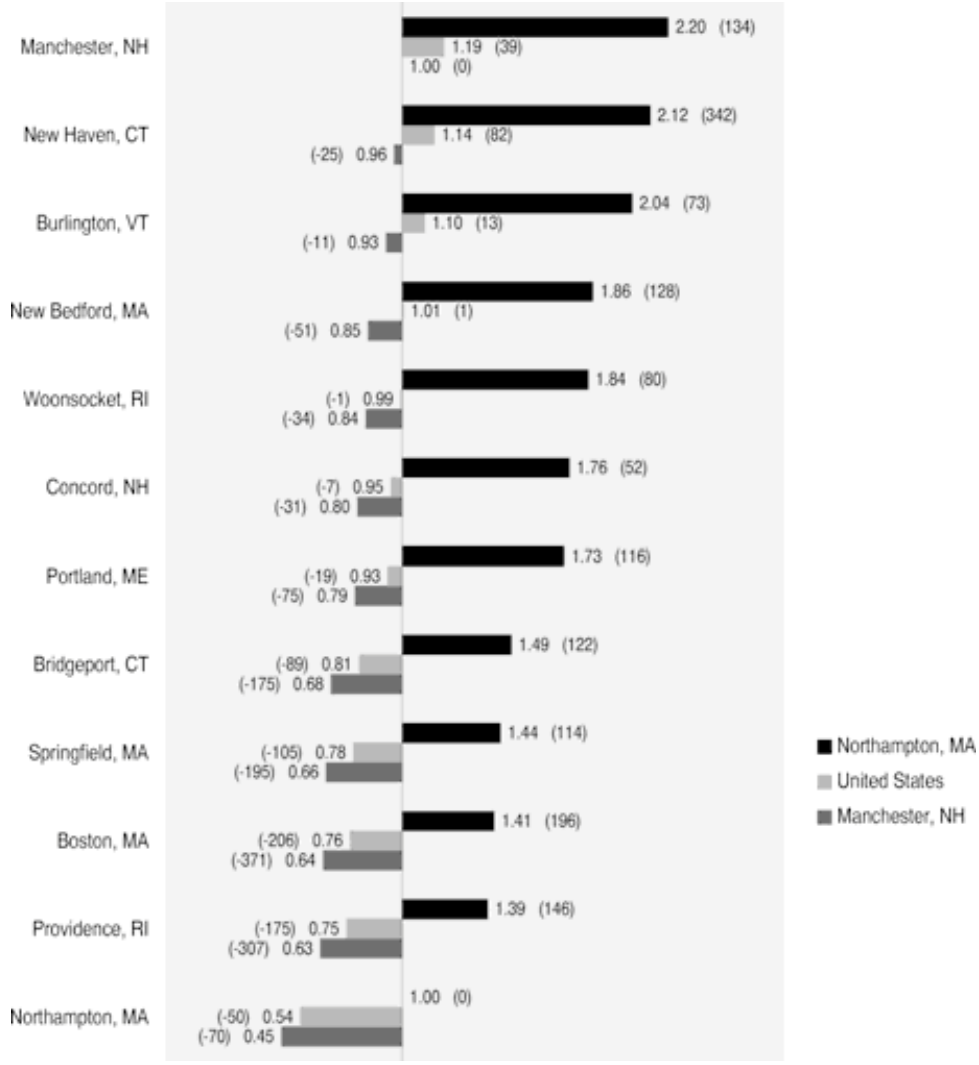


Figure 5.16. CABG Procedures per 1,000 Medicare Enrollees In Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Hospital Service Areas (1992-93)

The figure gives the ratio of coronary artery bypass grafting procedures in selected hospital service areas to the lowest and highest ranked areas. It also compares each selected service area to the U.S. average. The number of bypass procedures above (+) or below (-) the number predicted by the experience in the benchmark area for 1992-93 is given in parentheses. For example, the rate of bypass procedures per 1,000 Medicare enrollees living in Manchester, New Hampshire, was 2.2 times higher than for enrollees living in Northampton, Massachusetts. If the Northampton bypass procedure rate had applied to the residents of Manchester, 134 fewer bypass procedures would have been performed.

Benchmarking: CABG Procedures

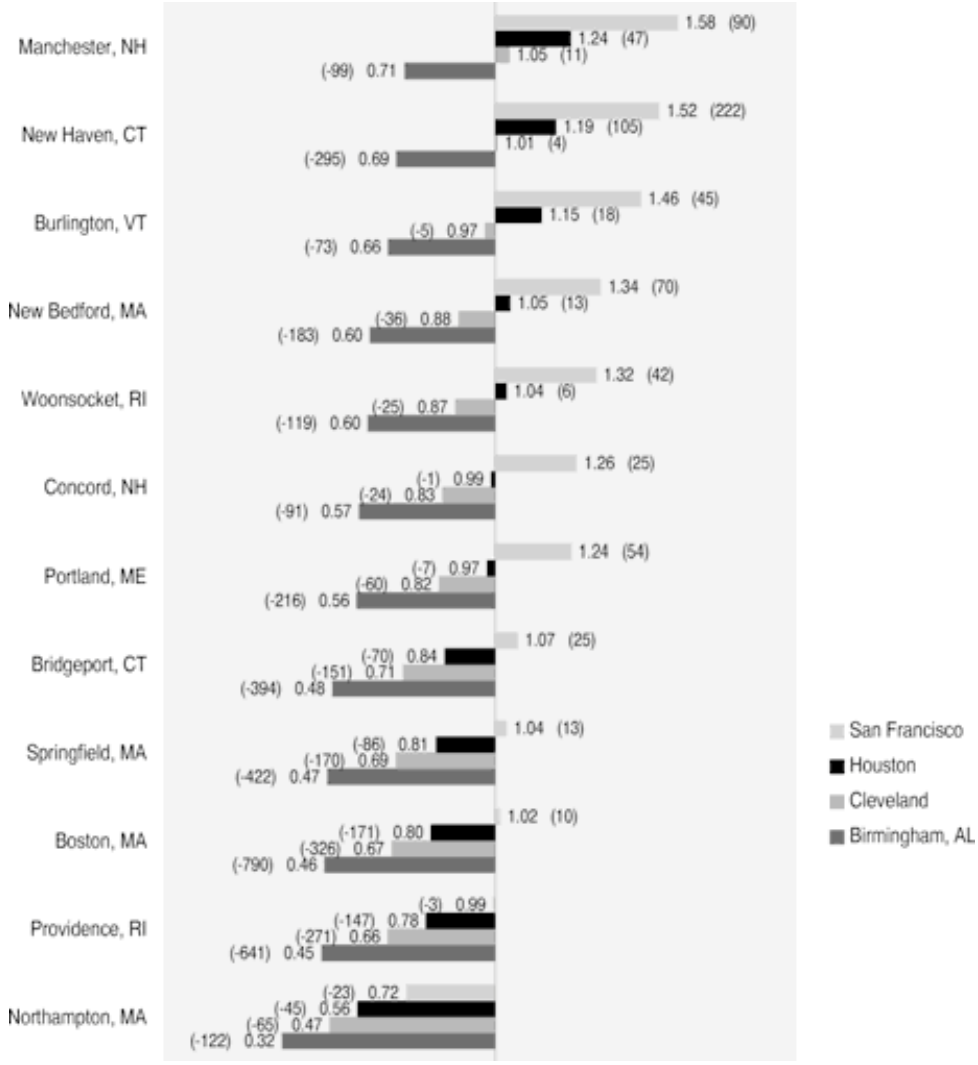


Figure 5.17. CABG Procedures per 1,000 Medicare Enrollees In Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1992-93)

The figure gives the ratio of coronary artery bypass grafting procedures in selected hospital service areas in the New England States, compared to other areas. The number of bypass procedures above (+) or below (-) the number predicted by the experience in the benchmark areas is in parentheses. For example, the number of bypass procedures per 1,000 Medicare enrollees living in Manchester, New Hampshire, was 1.58 times higher than for enrollees living in San Francisco. If the San Francisco bypass procedure rate had applied to residents of Manchester, 90 fewer bypass procedures would have occurred. If the Birmingham, Alabama, benchmark had applied, 99 more bypass procedures would have been performed.

Benchmarking: Angiography

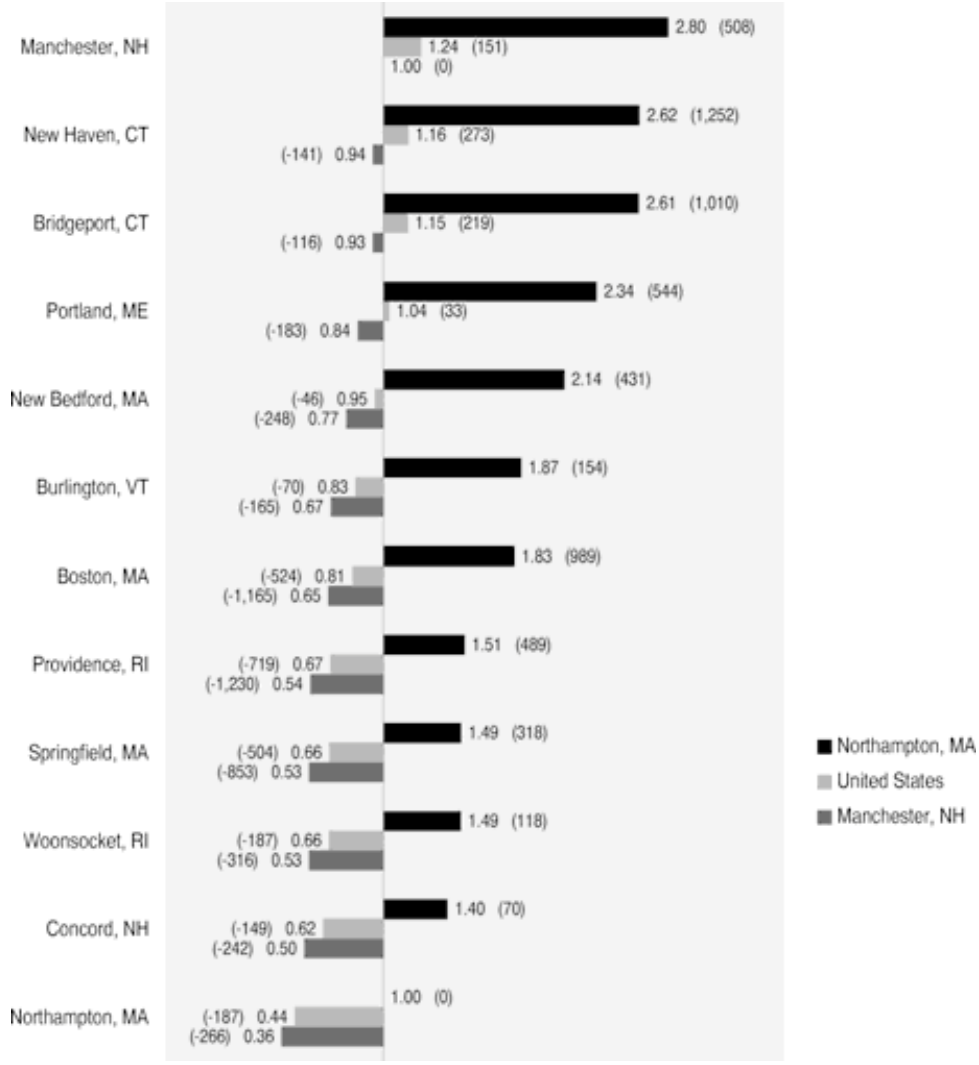


Figure 5.18. Angiography Procedures per 1,000 Medicare Enrollees In Selected Hospital Service Areas in the New England States Compared to the Highest and Lowest Ranked Selected Hospital Service Areas (1992-93)

The figure gives the ratio of angiographies in selected hospital service areas to the lowest and highest ranked areas. It also compares each selected area to the U.S. average. The number of angiographies above (+) or below (-) the number predicted by the experience in the benchmark area for 1992-93 is given in parentheses. For example, the number of angiographies per 1,000 Medicare enrollees living in Manchester, New Hampshire, was 2.8 times higher than for enrollees living in Northampton, Massachusetts. If the Northampton angiography rate had applied to the residents of Manchester, 508 fewer angiographies would have been performed.

Benchmarking: Angiography

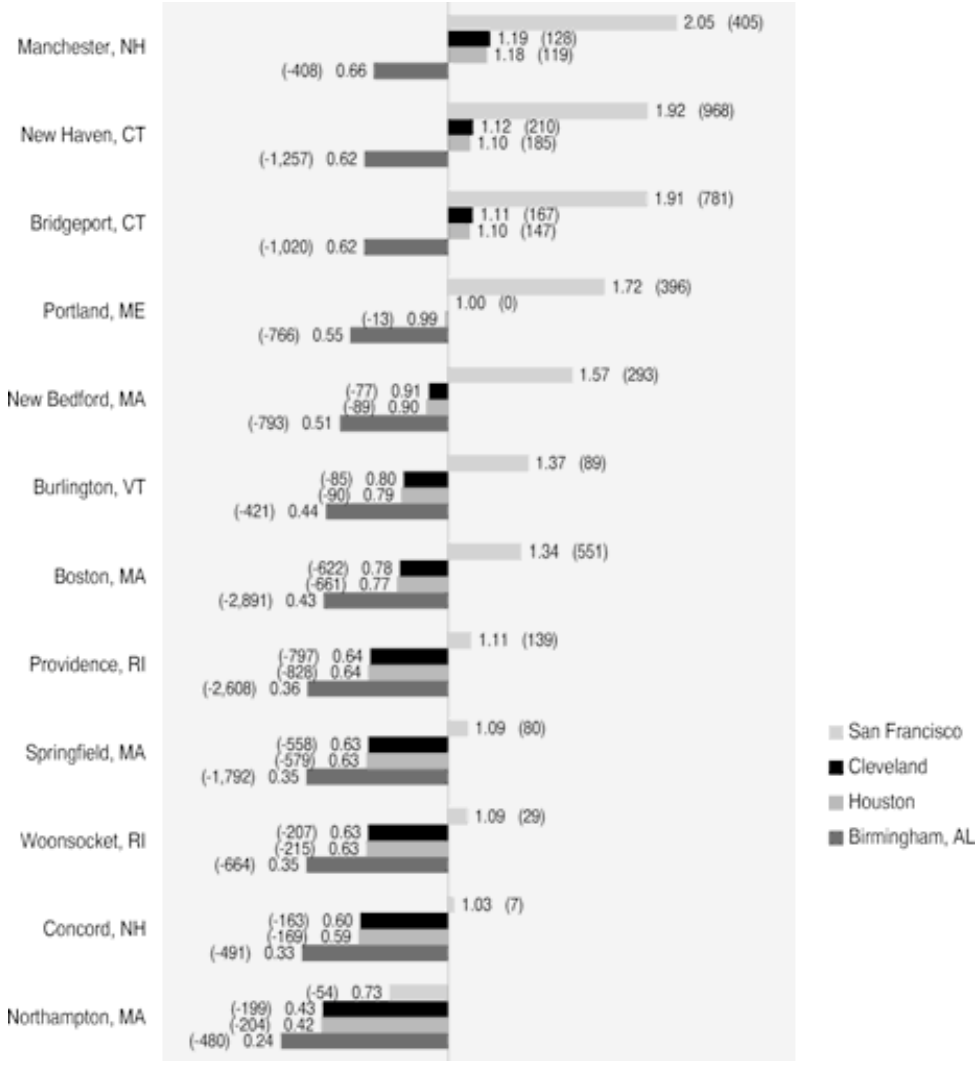


Figure 5.19. Angiography Procedures per 1,000 Medicare Enrollees in Selected Hospital Service Areas in the New England States Compared to Selected Hospital Service Areas Elsewhere in the U.S. (1992-93)

The figure gives the ratio of angiographies in selected hospital service areas in the New England States to other areas. The number of angiographies above (+) or below (-) the number predicted by the experience in the benchmark areas is in parentheses. For example, the rate of angiographies per 1,000 Medicare enrollees living in Manchester, New Hampshire, was 2.05 times higher than for enrollees living in San Francisco. If the San Francisco angiography rate had applied to residents of Manchester, 405 fewer angiographies would have occurred. If the Birmingham, Alabama, benchmark had applied, 408 more angiographies would have been performed.

TABLE 5 All rates are age, sex and race adjusted and are for 1992-93. The denominator is based on two-year enrollee or person-years of experience.

For total, surgical and medical discharges as well as discharges for high variation medical conditions, hospital service areas with total populations of fewer than 3,500 were omitted from the figures and maps. This gives a minimum 2-year population of about 700 person-years. With an average total discharge rate of 315 per 1,000, the minimum standard error for rates displayed in the figures and maps is less than 5.6% of the U.S. average (rate = 315, SE = .018) under binomial assumptions. Rates for HSAs that do not meet the minimum population criteria are shown in parentheses in Table 5.

For specific surgical procedures, hospital service areas with fewer than 25 expected cases were not included in the figures and tables. Given the low average procedure rate of between 1 and 5 procedures per 1,000, the largest standard error for included areas is less than 20% of the overall rate. Rates for HSAs that do not meet the minimum expected case criterion are shown in parentheses in Table 5.

Rates for HSAs with 10 cases or fewer are omitted from the tables.

TURP for BPH = transurethral prostatectomy for male Medicare enrollees with benign prostatic hyperplasia.

TABLE 5

Hospitalizations for Total, Surgical, Medical, and High Variation Medical Conditions, and Selected Diagnostic and Surgical Procedures in Hospital Service Areas per 1,000 Medicare Enrollee Person-Years (1992-93)

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	All Discharges	All Medical Discharges	All Surgical Discharges	High Variation Medical Conditions	CABG Surgery	PTCA	Coronary Angiography	Back Surgery	TURP for BPH
Connecticut											
Bridgeport	299,628	87,521	260.8	173.3	87.5	147.5	4.2	6.4	18.7	2.9	11.7
Bristol	76,599	20,205	332.2	235.9	96.5	205.5	7.5	4.3	15.2	1.6	10.2
Danbury	159,854	30,989	270.9	186.1	84.9	161.0	4.5	3.6	14.7	2.1	10.1
Derby	89,022	25,084	267.3	178.3	88.7	152.0	6.2	5.8	16.8	2.6	11.9
Greenwich	58,506	18,585	266.6	180.1	86.6	152.0	3.1	2.4	12.4	4.7	8.8
Hartford	511,789	144,402	240.9	151.7	89.4	130.3	5.8	3.5	14.0	2.6	9.3
Manchester	85,015	21,766	275.3	184.2	91.0	162.0	8.6	3.8	15.8	2.1	8.2
Meriden	100,279	28,462	258.3	166.9	91.5	141.2	4.8	4.7	15.5	2.3	11.5
Middletown	158,987	41,221	229.7	147.6	82.0	121.7	3.9	2.6	9.8	1.8	8.5
Milford	49,940	14,309	298.0	212.0	86.2	184.1	6.0	5.7	18.1	1.3	8.7
New Britain	109,594	34,470	267.0	170.5	96.1	146.3	6.4	6.1	20.1	1.7	8.7
New Haven	386,607	108,187	235.6	151.8	83.9	129.4	6.0	6.2	18.7	1.1	7.0
New London	154,948	35,630	263.0	177.9	85.0	149.7	4.6	3.1	10.2	1.9	7.6
New Milford	43,274	9,551	298.2	204.3	93.9	180.2	3.3	2.2	8.8	1.4	12.3
Norwalk	145,346	36,718	254.3	168.3	85.9	145.5	3.7	4.3	15.1	2.6	12.1
Norwich	70,355	18,500	322.0	217.8	104.0	188.2	5.3	4.2	11.7	1.4	15.6
Putnam	67,281	17,562	296.7	207.9	88.8	178.7	5.4	2.9	12.7	1.6	11.9
Rockville	52,009	10,529	308.9	213.7	95.2	187.3	7.9	5.2	19.1	2.9	8.5
Sharon	38,423	12,249	304.0	206.3	97.8	179.6	4.8	3.4	11.9	1.7	16.5
Southington	38,591	10,081	348.9	244.9	104.1	215.4	7.6	8.9	26.6	2.8	14.9
Stafford Springs	72,350	15,987	293.2	198.2	94.8	173.0	5.2	2.5	12.8	1.7	10.4
Stamford	126,055	32,576	297.1	201.2	95.9	175.4	3.7	3.7	13.1	3.7	15.9
Torrington	56,737	18,039	324.7	227.0	97.7	196.2	4.3	3.2	13.4	2.3	17.4
Waterbury	255,132	74,277	299.1	197.7	101.4	171.0	5.1	7.1	21.4	3.2	10.6
Willimantic	75,325	14,515	330.3	232.0	98.4	201.9	5.1	4.6	14.7	3.0	9.5
Winsted	18,623	5,035	287.9	203.0	85.0	178.8	3.3	3.7	10.4	(3.1)	19.0
Maine											
Augusta	68,143	18,003	273.4	187.7	85.7	159.1	3.4	2.4	9.4	3.4	9.1
Bangor	121,418	27,690	295.8	206.8	89.0	177.8	4.9	3.2	15.0	2.3	12.9
Bar Harbor	9,698	3,694	404.1	309.2	94.2	278.6	(3.3)		9.5		(7.6)
Belfast	18,596	5,615	321.7	236.0	86.1	205.5	3.3	3.4	10.1		6.0
Biddeford	61,604	17,996	305.5	213.5	92.0	181.0	4.5	4.5	13.9	2.1	12.7
Blue Hill	8,522	3,433	300.5	213.7	86.8	185.9	(3.6)		9.5		(11.5)
Boothbay Harbor	5,640	2,414	286.0	201.7	84.4	176.8			10.9		
Bridgton	14,858	4,560	404.9	309.5	96.5	272.4	4.1	(7.6)	19.3	(3.2)	12.0
Brunswick	69,003	17,171	298.8	219.5	79.5	191.4	4.2	2.7	10.6	2.3	5.2
Calais	14,450	4,648	411.6	307.0	105.0	268.9	5.3	(2.9)	17.0	(2.3)	17.6
Caribou	27,267	5,907	369.9	271.0	99.4	235.3	4.6	1.9	12.4	(1.8)	17.0

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	All Discharges	All Medical Discharges	All Surgical Discharges	High Variation Medical Conditions	CABG Surgery	PTCA	Coronary Angiography	Back Surgery	TURP for BPH
Damariscotta	9,152	4,148	340.9	250.4	90.6	218.5	(4.4)	(3.5)	15.9		(12.8)
Dover-Foxcroft	21,483	6,662	361.4	261.7	99.9	228.5	3.7	4.4	16.9	(3.1)	12.3
Ellsworth	21,025	6,583	343.8	261.0	83.3	224.5	3.2	3.5	12.1		7.9
Farmington	35,630	9,580	304.7	212.4	92.3	182.4	4.4	4.0	15.1	2.0	13.9
Fort Kent	13,563	4,208	321.0	240.4	80.9	203.7	(4.7)	(3.0)	13.5		(18.5)
Greenville	3,790	1,399	415.3	335.6	81.2	295.0			(9.6)		
Houlton	18,053	5,764	360.4	278.6	82.3	250.9	5.5	3.7	15.0		13.3
Lewiston	112,342	28,883	330.5	222.7	107.8	198.0	5.5	6.3	22.7	2.3	20.2
Lincoln	14,280	3,763	433.0	352.9	82.0	316.9	(5.1)	(3.7)	15.9		(10.3)
Machias	15,962	5,375	319.5	233.8	85.9	196.3	4.1	3.4	12.9		10.5
Millinocket	12,843	3,481	387.7	276.8	111.3	249.9	(6.7)	(2.9)	16.7		(10.7)
Norway	25,007	7,492	316.8	212.2	104.6	191.9	5.1	3.9	13.4	(2.5)	9.6
Pittsfield	17,534	4,384	397.8	304.7	93.8	270.3	(4.1)		8.5	(2.4)	(17.2)
Portland	215,490	56,499	317.9	223.4	94.5	198.7	4.9	4.0	16.8	3.3	10.9
Presque Isle	28,392	7,674	317.3	229.5	88.0	191.9	4.3	3.7	13.3	(1.4)	12.2
Rockland	44,103	15,196	300.7	215.2	85.6	182.9	3.5	3.5	11.4	2.1	11.3
Rumford	16,930	5,645	420.8	315.7	106.1	282.4	5.4	6.6	24.0	(3.4)	12.4
Sanford	44,589	10,351	304.2	223.0	81.4	191.7	3.3	3.3	12.3	2.6	9.0
Skowhegan	29,758	8,272	401.2	289.2	112.2	253.3	5.2	3.7	15.1	(2.5)	28.0
Waterville	64,687	16,116	319.1	228.4	90.9	193.7	4.0	2.4	11.3	1.6	16.4
York	30,504	9,925	327.5	236.7	90.9	205.9	6.8	4.6	20.8	1.9	12.8
Massachusetts											
Arlington	73,533	24,053	319.7	228.0	91.6	194.7	4.2	2.9	12.0	2.4	14.4
Athol	23,913	6,877	405.8	300.2	105.5	260.0	3.6	2.5	8.4	(2.2)	14.1
Attleboro	102,110	19,908	353.1	259.8	93.6	228.4	5.2	4.7	14.4	1.6	13.2
Ayer	57,962	8,266	352.8	254.1	98.7	216.0	4.5	4.8	14.3	(2.0)	16.6
Beverly	111,015	29,755	288.1	200.2	87.8	173.2	4.0	2.4	12.2	1.8	13.6
Boston	768,694	167,330	370.9	270.7	99.6	240.2	4.0	3.7	13.1	2.0	13.5
Brockton	239,486	52,577	385.8	287.7	98.2	253.1	5.2	5.0	16.1	1.4	14.7
Burlington	23,093	4,167	330.7	244.7	86.9	211.8	(3.7)	(3.1)	10.9		(9.0)
Cambridge	152,358	35,097	350.8	255.0	95.4	225.2	3.9	3.0	12.4	1.5	15.7
Clinton	19,287	4,365	453.4	353.9	99.4	317.0	(4.7)	(2.8)	11.3		(16.6)
Concord	93,269	18,007	315.2	222.0	93.2	191.1	5.5	4.8	18.2	2.5	7.7
Everett	35,493	10,772	432.6	332.9	99.5	299.6	3.6	4.2	14.2	1.0	12.5
Fall River	161,355	51,391	337.5	253.5	84.3	217.3	4.3	2.7	11.0	1.7	11.2
Falmouth	66,543	24,936	307.8	210.6	97.1	183.4	5.1	3.7	12.2	2.5	16.7
Fitchburg	55,412	13,871	325.8	236.1	89.7	204.2	2.9	2.7	7.1	2.6	12.8
Gardner	50,090	12,037	355.3	264.7	90.7	228.9	3.0	2.6	8.6	3.1	8.3
Gloucester	36,198	10,772	383.0	291.3	91.3	261.3	4.0	2.4	10.9	2.0	16.2
Great Barrington	21,360	7,139	287.6	197.9	89.7	173.2	2.9	2.7	7.6	(1.9)	6.5
Greenfield	60,801	16,748	286.8	205.8	81.1	170.9	3.9	2.4	9.7	2.2	8.1
Haverhill	77,130	19,014	355.9	269.6	86.2	238.4	3.8	3.0	11.9	2.1	15.4
Holyoke	67,693	20,180	331.4	241.4	89.8	211.9	3.8	2.5	9.4	2.1	9.8
Hyannis	121,922	63,970	261.3	168.6	92.6	143.4	4.5	4.0	13.8	1.9	14.7
Lawrence	122,521	27,589	346.3	250.4	95.8	221.2	5.7	4.1	17.6	2.0	10.1
Leominster	38,145	8,660	353.9	265.7	88.4	233.5	5.5	2.7	9.9	(1.7)	11.4

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	All Discharges	All Medical Discharges	All Surgical Discharges	High Variation Medical Conditions	CABG Surgery	PTCA	Coronary Angiography	Back Surgery	TURP for BPH
Lowell	259,507	49,557	362.3	266.8	95.9	233.0	4.4	3.6	13.0	1.4	19.4
Ludlow	18,820	5,917	267.7	184.4	83.1	160.8	3.7	1.9	8.4	(3.1)	7.5
Lynn	96,347	26,635	338.7	242.1	96.6	210.4	4.4	3.2	12.0	1.9	15.2
Malden	54,114	14,500	410.0	300.6	109.2	265.4	5.2	5.2	16.5	1.9	14.2
Marlborough	52,180	10,729	389.5	291.9	97.7	250.9	4.5	4.1	14.9	1.8	16.8
Medford	57,338	17,954	382.7	286.4	96.0	252.9	4.9	3.3	13.1	1.4	11.4
Melrose	78,545	23,621	384.2	284.0	100.1	252.2	5.3	3.3	15.7	2.3	12.1
Methuen	65,410	18,549	333.3	243.6	90.1	217.8	6.0	4.3	18.6	1.6	9.2
Milton	25,558	8,444	381.1	276.2	104.7	248.5	4.1	2.8	12.2	(3.1)	14.2
Nantucket	6,012	1,799	357.7	271.2	86.4	244.9		(6.1)	11.8		
Natick	210,485	45,891	359.7	260.5	99.4	229.6	5.0	3.2	14.0	2.1	14.2
Needham	27,576	8,814	355.3	248.3	107.0	217.9	3.3	4.5	10.2	(2.2)	20.5
New Bedford	163,683	52,785	311.7	220.8	90.9	188.5	5.3	3.7	15.3	2.1	10.7
Newburyport	63,370	15,985	372.6	278.2	94.6	245.1	5.3	4.3	15.9	2.0	13.6
Newton	83,348	22,110	325.0	223.9	101.1	196.7	3.9	2.7	10.0	2.4	14.0
Norfolk	40,393	6,518	366.2	272.8	93.6	243.4	3.9	3.8	12.9	(1.8)	13.1
North Adams	39,439	14,201	312.4	232.0	80.4	196.3	3.4	2.3	6.1	2.2	4.8
Northampton	101,922	20,698	267.7	193.6	74.1	164.7	2.8	2.2	7.2	1.8	6.4
Norwood	110,164	31,083	346.6	253.0	93.8	218.7	4.5	4.1	14.2	2.3	10.1
Oak Bluffs	11,541	3,886	398.1	297.8	100.3	267.2	(5.0)	(6.2)	16.6		(8.7)
Palmer	20,397	6,077	368.3	274.6	94.2	238.3	4.5	2.5	9.9		7.8
Pittsfield	100,989	32,040	329.7	236.7	93.1	209.0	4.5	2.7	9.2	1.7	12.1
Plymouth	81,544	19,097	355.9	241.9	113.9	213.5	4.0	3.9	11.9	2.8	45.3
Quincy	67,250	22,139	374.5	275.5	98.7	238.9	3.8	3.3	10.9	2.3	13.2
Salem	118,948	35,378	330.5	239.3	91.3	208.5	4.8	3.7	14.2	2.2	14.9
Somerville	76,393	16,273	384.9	281.2	103.6	250.9	3.9	2.9	11.9	1.4	17.0
South Weymouth	215,427	53,707	348.6	253.1	95.7	219.8	4.8	3.1	13.2	1.6	13.3
Southbridge	41,352	9,295	369.4	268.5	100.9	235.1	3.7	2.2	5.6	1.4	23.9
Springfield	312,914	90,992	279.1	192.2	86.9	166.6	4.1	3.1	10.7	2.2	12.2
Stoneham	22,147	6,778	360.4	267.5	93.0	235.9	4.0	3.7	12.7	(2.5)	9.6
Stoughton	26,777	7,149	382.0	287.1	95.5	252.7	4.6	5.5	19.8	(2.8)	14.7
Taunton	95,195	23,203	331.6	236.2	95.5	203.8	4.6	2.2	9.5	1.1	18.5
Waltham	68,092	17,371	375.7	274.6	101.2	244.4	4.9	3.8	14.6	1.7	16.3
Ware	31,070	7,734	344.0	258.9	85.5	226.3	4.2	3.6	11.0		10.4
Wareham	25,767	7,949	328.8	225.4	103.3	195.1	4.7	4.5	15.7	(2.1)	16.8
Webster	25,736	6,496	370.3	274.4	95.8	246.6	3.5	2.1	6.4		22.9
Westfield	53,368	13,448	279.0	193.9	85.1	165.9	3.9	3.2	9.3	1.6	11.5
Winchester	108,572	26,968	339.0	252.9	86.3	221.0	4.6	3.0	13.2	1.6	8.4
Winthrop	18,907	5,708	414.7	305.6	108.5	275.8	5.3	5.4	17.0		23.5
Worcester	405,867	84,525	329.5	235.7	93.7	207.9	4.8	3.0	11.8	1.8	15.0
New Hampshire											
Berlin	17,855	6,637	357.3	279.0	78.7	243.1	3.5	2.3	11.9	(2.2)	11.6
Claremont	22,069	6,775	289.4	200.7	88.7	163.3	3.1	1.9	10.0	(3.7)	14.5
Colebrook	6,633	1,934	293.7	235.5	59.5	210.3					(12.6)
Concord	105,055	24,207	266.5	179.2	87.3	150.2	5.0	1.7	10.1	4.1	7.4
Derry	47,907	5,944	311.0	221.6	89.5	194.9	5.6	4.8	19.2		9.4

Hospital Service Area	Resident Population	Medicare Enrollees (1992 plus 1993)	All Discharges	All Medical Discharges	All Surgical Discharges	High Variation Medical Conditions	CABG Surgery	PTCA	Coronary Angiography	Back Surgery	TURP for BPH
Dover	74,625	14,933	258.2	173.2	84.7	151.4	4.6	4.3	11.1	0.8	6.3
Exeter	79,010	17,156	258.9	170.8	88.0	147.2	5.8	3.4	16.2	2.1	11.9
Franklin	23,078	5,992	333.4	252.4	81.1	213.4	3.7		7.1	(2.0)	8.8
Keene	55,756	14,961	252.9	176.0	76.9	142.5	3.5	1.9	7.8	1.6	11.9
Laconia	43,292	13,907	282.1	192.1	89.9	161.6	3.7	1.8	6.9	3.6	10.7
Lancaster	13,428	4,425	338.5	259.7	79.4	225.1	(4.9)	(3.0)	7.3		(10.8)
Lebanon	61,167	15,663	227.4	149.5	77.7	129.6	3.2	2.4	9.1	2.7	8.3
Littleton	14,253	4,251	240.2	168.1	72.1	142.7			4.6	(2.7)	(12.9)
Manchester	174,345	39,488	262.4	176.0	86.3	152.6	6.2	5.0	20.0	2.5	12.2
Nashua	163,513	28,485	262.2	183.8	78.5	156.0	5.0	3.9	17.0	2.1	9.8
New London	22,944	7,417	247.2	170.3	76.9	145.1	3.9	1.7	9.0	(3.3)	12.4
North Conway	14,058	4,358	258.1	170.8	87.0	144.9	(3.4)	(3.4)	12.8	(3.8)	(11.3)
Peterborough	33,448	7,653	246.8	166.6	80.1	137.3	3.9	2.8	9.9	(1.7)	11.9
Plymouth	17,010	4,223	271.5	192.4	79.2	167.0	(3.6)		9.3		(10.5)
Portsmouth	35,135	9,002	320.6	222.1	98.5	194.4	5.2	5.1	22.9	(2.4)	12.9
Rochester	42,504	10,140	261.2	180.5	80.6	154.3	5.3	2.8	10.6	1.2	4.8
Wolfeboro	18,800	7,952	283.7	198.6	85.1	173.1	6.5	3.4	17.5	(2.4)	10.1
Woodsville	13,878	4,627	279.1	199.5	79.6	165.2	4.0		9.6	(2.8)	8.8
Rhode Island											
Newport	69,543	16,511	307.2	216.8	90.4	187.9	5.5	3.3	11.8	1.9	11.2
Pawtucket	89,835	25,386	308.4	219.0	89.5	186.3	4.1	3.4	10.8	1.9	14.3
Providence	469,499	133,545	287.0	201.4	85.6	173.4	3.9	3.1	10.8	1.6	11.6
Wakefield	56,533	12,515	317.4	224.4	93.0	196.5	4.3	3.3	10.8	1.6	10.7
Warwick	187,117	50,130	337.2	241.0	96.3	207.7	3.8	2.8	12.4	1.4	15.2
Westerly	49,390	13,648	323.1	230.3	92.9	199.9	5.0	2.8	13.2	2.1	8.2
Woonsocket	127,734	33,689	323.9	230.9	93.0	197.4	5.2	2.9	10.7	1.3	14.9
Vermont											
Bennington	48,768	14,104	313.7	216.6	97.1	187.5	4.8	2.6	10.1	2.8	7.6
Berlin	61,594	15,240	263.6	183.9	79.6	159.3	3.6	2.6	9.2	2.3	13.9
Brattleboro	29,089	7,374	265.9	178.4	87.5	151.4	3.4	1.6	6.4	(2.2)	13.0
Burlington	142,306	24,815	253.2	172.6	80.6	147.2	5.8	3.8	13.4	2.1	10.3
Middlebury	27,976	6,228	256.0	174.9	81.0	150.9	4.6	4.6	11.1	(2.2)	19.3
Morrisville	22,493	5,599	286.9	212.8	74.4	185.6	4.9	3.7	10.0		10.2
Newport	23,298	6,847	306.4	234.2	72.9	203.2	3.9	1.9	9.8	(2.0)	10.2
Randolph	17,561	4,450	292.2	223.3	69.3	197.4	(3.6)	(2.4)	8.5		8.1
Rutland	64,801	18,495	324.1	235.9	88.3	207.9	4.5	2.1	8.6	2.3	17.7
Springfield	29,187	10,220	278.2	192.2	85.9	162.3	3.0	2.1	7.9	2.6	12.9
St Albans	38,242	9,150	299.0	212.9	86.2	175.0	5.5	2.5	12.3	1.4	14.8
St Johnsbury	24,303	6,622	258.9	181.2	77.7	155.1	2.6	2.6	6.4	(2.1)	16.9
Townshend	4,115	1,228	260.6	188.9	71.7	156.6					
Windsor	8,165	2,588	253.6	174.8	78.8	147.9			5.3		(12.1)

Part Six

Hospital Bed Allocation and Medicare Reimbursements for Inpatient Services by Hospital Service Area and Hospital by Location

Hospital Bed Allocation and Medicare Reimbursements for Inpatient Services by Hospital Service Area and Hospital by Location

This section provides detailed information on the contribution of individual hospitals to the experience of the population living within each hospital service area (HSA). For each HSA, Table Six lists by name all hospitals within the area which individually account for 1% or more of the 1992 and 1993 inpatient Medicare reimbursements for enrollees living in the HSA. It also lists the two out-of-area hospitals that accounted for the greatest amount of reimbursements made for residents of the HSA. The contribution of all other hospitals to the inpatient care of the enrollees resident in the HSA are summarized.

Table Six is organized alphabetically by state and HSA. The table for Bridgeport, Connecticut, on the facing page, is provided as an example.

Column 1 lists the name and state of the HSA, together with the total population of the HSA.

Column 2 lists the names of local hospitals and out of area hospitals. Bridgeport Hospital and St. Vincent's Medical Center, which are both within the Bridgeport HSA, received 48.4% and 40.0% of the HSA's inpatient Medicare reimbursements for 1992 and 1993 (column 11). Among out-of-area hospitals, Yale-New Haven Hospital received 3.7% of reimbursements for residents of the Bridgeport HSA, and Norwalk Hospital received 1.3% of reimbursements for residents of the Bridgeport HSA. All other out-of-area hospitals, which included hospitals located anywhere in the United States, received 6.6% of the inpatient reimbursements for Medicare enrollees living in the Bridgeport HSA.

Column 3 (1992-93 HOSP's MPDs) gives the total number of Medicare patient days of care in 1992 and 1993 provided by each hospital (in thousands of patient days). For example, Bridgeport Hospital provided 146.7 thousand patient days of care to residents of all areas.

Hospital Bed Allocation and Medicare Reimbursements for Inpatient Services for the Bridgeport, Connecticut HSA by Hospital by Location

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Bridgeport, CT 299,628									
Hospitals Within HSA									
Bridgeport Hospital	146.7	87.3	93.28	83.0	505	440.6	50.2	77.44	48.6
St Vincents Medical Center	123.1	86.6	82.12	78.0	391	338.6	41.8	64.06	40.2
Hospitals Outside HSA									
Yale New Haven Hospital	136.7	3.3	150.60	3.9	777	25.7	1.8	5.85	3.7
Norwalk Hospital	88.1	3.9	57.25	3.7	349	13.4	1.3	2.14	1.3
All Others						51.2	4.9	9.99	6.3
All Hospitals						869.5	100.0	159.49	100.0

Column 4 (% of HOSP's MPDs from HSA) gives the percentage of total Medicare patient days for each listed hospital in 1992 and 1993 that was provided to residents of the HSA. For example, 87.3% of Bridgeport Hospital's patient days were for residents of the local HSA. (The remaining 13.7% were for residents of all other HSAs, including neighboring HSAs as well as residents of remote HSAs from which patients might have been temporary visitors or have experienced emergencies while traveling through Bridgeport.)

Column 5 (1992-93 MRs — Dollars in Millions) gives the total reimbursement for inpatient services in millions of dollars received by each individually-listed hospital. For example, in 1992-93, the Medicare Part A database shows that reimbursements to Bridgeport Hospital were $93.28 million for residents of all areas.

Column 6 (% of HOSP's MRs from HSA) gives the percent of total inpatient reimbursements for listed hospitals in 1992 and 1993 (column 5) that were provided to Medicare enrollees living in the HSA. For example, 83.0% of Bridgeport Hospital's reimbursements were for residents of the Bridgeport HSA.

Column 7 (Staffed Beds) gives for each listed hospital the number of staffed beds in 1993. In that year, Bridgeport Hospital had 505 staffed beds.

Column 8 (Allocation of HSA Beds by HOSP) estimates the number of hospital beds allocated to the residents of the HSA by each hospital and by all hospitals. It is obtained by multiplying the number of staffed beds (column 7) by the percent of each hospital's Medicare patient days that are for the HSA's Medicare enrollees (column 4). For example, 87.3% of Bridgeport Hospital's patient days are provided to enrollees of the HSA (column 4) and in 1993 there were 505 staffed beds. The estimated allocation of hospital beds to Bridgeport is .8725 x 505 = 440.6. Of the two listed out of area hospitals, Yale-New Haven contributes an estimated 25.7 of its 777 staffed beds, and Norwalk Hospital 13.4% of its 349 beds, to the residents of Bridgeport. Estimates are made for all hospitals contributing one or more patient days to the total for the HSA. For example, the remaining out-of-area hospitals ("All Others" in column 2) contribute a total of 51.2 hospital beds to the residents of Bridgeport. Included in the All Others group would be the use of hospital care residents of Bridgeport make while out of area, for example while vacationing in Florida.

The total (All Hospitals) gives the sum of all contributed beds to the care of the HSA. For example, in 1993 an estimated 869.5 hospital beds were allocated to the care of residents of Bridgeport. Hospital bed allocations are made under the assumption that the HSA boundary crossing patterns seen for Medicare patients are similar to those among people under 65 years of age. Studies in the Northeast and in California have shown this to be a reasonable assumption.

Column 9 (% of HSA's MPDs by HOSP) gives the percent of the HSA's total patient days provided by each hospital. For example, 50.1% of the patient days for Medicare enrollees living in Bridgeport were provided by Bridgeport Hospital.

Column 10 (HSA MRs by HOSP — Dollars in Millions) gives the amount of Medicare reimbursements for inpatient services provided by each listed hospital and

all other hospitals to the residents of Bridgeport. For example, Bridgeport Hospital received $77.44 million for inpatient services provided to Medicare enrollees living in Bridgeport; Yale-New Haven Hospital received $5.85 million, and "all other" out-of-area hospitals received $10.54 million. For all inpatient care of the Medicare residents of Bridgeport in 1992 and 1993, reimbursements totaled $160.03 million.

Column 11 (% of HSA's MRs by HOSP) gives the proportion of Medicare inpatient reimbursements received by each hospital. For example, Bridgeport Hospital received 48.4% of total reimbursements ($77.44/160.03 x 100= 48.4%).

On the Limitations of Space

The limitations on space in the printed version of the regional Atlas also make it impractical to individually list more than two out-of-area hospitals contributing to the care of a given HSA. In the case of Bridgeport, with its highly localized pattern of care, only hospitals receiving less than 1.3% of the HSA Medicare inpatient reimbursements were not individually listed. But in several HSAs, particularly those near major medical centers, truncation resulted in a much less complete picture of the patterns of resource allocation and competition among institutions for market share in the HSA. The Cambridge, Massachusetts HSA, located just across the Charles River from Boston, provides an example. In contrast to Bridgeport, where over 88% of Medicare reimbursements for HSA enrollees were to the two local hospitals, in Cambridge, only 52.5% were provided at Mt. Auburn Hospital and Cambridge Hospital, and nine out-of-area hospitals had a 1.4% share or greater.

The following table, which lists individually each out-of-area hospital whose Medicare reimbursements from the Cambridge HSA exceeded 1%, provides an appreciation of the compromise between space and detail.

Hospital Bed Allocation and Medicare Reimbursements for Inpatient Services for the Cambridge, Massachusetts HSA by Hospital by Location

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Cambridge, MA 152,358									
Hospitals Within HSA									
Mt Auburn Hosp	74.7	56.4	62.12	53.2	286	161.3	39.2	33.03	38.1
Cambridge Hospital,The	24.1	64.5	20.54	62.7	176	113.4	14.4	12.87	14.9
Hospitals Outside HSA									
St Elizabeths Hospital	112.8	9.7	104.34	9.1	415	40.1	10.1	9.49	11.0
Massachusetts General Hospital	240.3	3.4	266.65	2.9	984	33.5	7.6	7.66	8.8
Waltham Hospital	46.9	11.4	28.03	11.3	213	24.2	5.0	3.16	3.6
Brigham And Womans Hospital	101.7	2.1	147.34	2.0	751	15.7	2.0	2.91	3.4
Beth Israel Hospital	113.0	2.3	131.56	2.2	462	10.7	2.4	2.86	3.3
Symmes Hospital Inc,The	43.5	9.5	27.77	8.9	109	10.3	3.8	2.46	2.8
Newton-Wellesley Hospital	61.9	3.5	55.00	3.2	316	10.9	2.0	1.77	2.0
Lawrence Mem Hospital Of Medford	57.0	3.7	30.17	4.3	150	5.6	2.0	1.29	1.5
Mary And Arthur Clapham Hospital	83.6	1.5	97.70	1.2	272	4.0	1.2	1.21	1.4
New England Deaconess Hospital	89.5	1.4	103.80	1.0	345	4.8	1.2	1.08	1.3
New England Baptist Hospital	45.6	2.7	39.31	2.4	185	5.1	1.2	0.96	1.1
Somerville Hospital	20.9	6.7	14.93	6.1	103	6.9	1.3	0.92	1.1
All Others						34.4	6.6	5.01	5.8
All Hospitals						480.9	100.0	86.68	100.0

About the Detailed Tables Available on the CD-ROM

The CD-ROM version of the regional Atlases is not constrained by space limitations. It contains a formatted version of Table Six (identical to that for the Cambridge, Massachusetts HSA) listing all hospitals that received 1% or more of Medicare reimbursements from the residents of each HSA. It also provides the data required for the user to generate a patient origin study for each hospital in the United States in order to analyze the proportion of the hospital's Medicare discharges, patient days and reimbursements that come from various areas of the country.

The following table illustrates one use of this data for the Mary Hitchcock Memorial Hospital (MHMH) in Lebanon, New Hampshire. Table 6.3 lists the HSAs from which MHMH had more than 10 discharges in 1992-93. The final line of the table lists totals for all HSAs in which any discharge occurred.

Column 2 (HSA of Patient Origin) lists the hospital service areas (HSA) where Medicare enrollees (MEs) discharged from MHMH live. Only those HSAs where there were more than ten discharges of MEs are included.

Column 3 (DCHGs from any HOSP of MEs in the HSA) gives the total number of discharges (DCHGs) for MEs living in the HSA from any hospital (HOSP) anywhere in the country. For example, there were 2,950 discharges from some hospital of Medicare enrollees living in the Springfield, Vermont hospital service area in 1992-93.

Column 4 (DCHGs of MEs in the HSA from MHMH) counts the discharges (DSHGs) from Mary Hitchcock Memorial Hospital (MHMH) of Medicare enrollees (MEs) living in the HSA in 1992-93. For example, there were 533 discharges from MHMH for MEs living in the Springfield, Vermont hospital service area.

Column 5 (MHMH % of HSA DCHGs) gives the percentage of all Medicare enrollee discharges (DCHGs) in an HSA that came from MHMH in 1992-93. MHMH accounted for 18.1% of the discharges for Medicare enrollees living in Springfield, Vermont in 1992-93.

Medicare Discharges, Patient Days of Care and Inpatient Reimbursements to Mary Hitchcock Memorial Hospital by HSA and Hospital Referral Region (HRR) of Enrollee Residence, 1992-93

Hospital Service Areas with Ten or Fewer Discharges from MHMH are not Shown

HSA of Patient Origin (2)	DCHGs from any HOSP of MEs in the HSA (3)	DCHGs of MEs in the HSA from MHMH (4)	MHMH % of HSA DCHGs (5)	All MRs for MEs in the HSA ($ in millions) (6)	MRs to MHMH for HSA MEs ($ in millions) (7)	MHMH % of HSAs MRs (8)	MPDs in any HOSP for MEs in the HSA (9)	MPDs in MHMH for MEs in the HSA (10)	MHMH % of HSAs MPDs (11)
Mary Hitchcock Memorial Hospital, Lebanon, NH									
Hospital Service Areas with more than 10 Medicare Discharges from Mary Hitchcock Memorial Hospital									
Lebanon, NH	3,706	2,762	74.5	24.71	19.70	79.7	30,684	23,861	77.8
Springfield, VT	2,950	533	18.1	15.32	5.19	33.9	22,661	5,375	23.7
Keene, NH	4,010	393	9.8	22.31	4.94	22.1	38,545	4,805	12.5
Claremont, NH	2,007	392	19.5	10.52	3.47	33.0	12,975	3,192	24.6
New London, NH	1,876	345	18.4	10.35	3.49	33.7	13,456	3,510	26.1
Woodsville, NH	1,337	335	25.1	7.69	3.00	39.0	9,274	3,364	36.3
Berlin, NH	2,409	288	12.0	11.63	2.93	25.2	19,065	2,838	14.9
Randolph, VT	1,323	269	20.3	6.87	2.72	39.5	8,812	2,556	29.0
Berlin, VT	4,140	240	5.8	21.59	2.60	12.0	32,610	2,471	7.6
St Johnsbury, VT	1,717	225	13.1	8.33	2.02	24.3	10,461	2,056	19.7
Newport, VT	2,086	217	10.4	9.99	2.33	23.3	12,224	1,915	15.7
Brattleboro, VT	2,035	215	10.6	10.78	2.79	25.9	18,538	2,257	12.2
Lancaster, NH	1,492	168	11.3	7.01	1.85	26.4	10,299	1,592	15.5
Greenfield, MA	5,014	166	3.3	28.61	1.93	6.7	35,780	1,764	4.9
Windsor, VT	677	131	19.4	3.38	1.04	30.8	4,451	1,032	23.2
Concord, NH	6,724	131	2.0	38.90	1.40	3.6	62,709	1,412	2.3
Littleton, NH	1,019	129	12.7	5.33	1.21	22.7	6,792	1,279	18.8
Laconia, NH	3,941	127	3.2	22.10	1.00	4.5	29,204	1,355	4.6
Plymouth, NH	1,136	119	10.5	6.43	1.09	16.9	7,903	1,327	16.8
Rutland, VT	6,240	119	1.9	31.77	1.13	3.6	55,757	987	1.8
Franklin, NH	2,037	77	3.8	10.25	0.72	7.0	14,852	1,123	7.6
Bennington, VT	4,505	66	1.5	22.35	0.73	3.3	37,923	710	1.9
Peterborough, NH	1,947	61	3.1	11.48	0.58	5.0	15,842	788	5.0
Colebrook, NH	566	58	10.3	2.56	0.57	22.2	3,929	770	19.6
Wolfeboro, NH	2,253	58	2.6	11.81	0.42	3.6	15,178	619	4.1
Manchester, NH	10,834	56	0.5	62.72	0.52	0.8	100,758	789	0.8
Townshend, VT	332	39	11.8	1.65	0.42	25.1	1,811	266	14.7
Morrisville, VT	1,607	36	2.2	8.57	0.26	3.0	11,925	218	1.8
Nashua, NH	7,690	36	0.5	48.85	0.33	0.7	80,075	302	0.4
Rochester, NH	2,727	31	1.1	15.46	0.26	1.7	22,565	298	1.3
North Conway, NH	1,118	25	2.2	5.92	0.23	3.8	7,729	308	4.0
Northampton, MA	5,761	23	0.4	29.65	0.22	0.7	44,077	189	0.4
Burlington, VT	6,493	13	0.2	41.25	0.11	0.3	62,850	124	0.2
Dover, NH	3,877	13	0.3	21.34	0.12	0.6	32,592	114	0.4
Glens Falls, NY	10,321	13	0.1	52.59	0.18	0.4	114,229	237	0.2
Exeter, NH	4,428	11	0.3	27.41	0.05	0.2	35,381	88	0.3
Boca Raton, FL	21,085	11	0.1	121.46	0.06	0.1	154,755	117	0.1
Naples, FL	20,662	11	0.1	123.75	0.10	0.1	153,644	83	0.1
MHMH Totals for All HSAs Served		8,568			76.93			82,589	

Column 6 (All MRs for MEs in the HSA ($ in Millions) gives the Medicare reimbursements (MRs) for the Medicare enrollees (MEs) living in the HSA independently of the hospital of their choice. Overall Medicare dollars benefiting the Medicare enrollees living in the Springfield, Vermont HSA totaled $24,720,000 in 1992-93.

Column 7 (MRs to MHMH for HSA MEs ($ in Millions) gives the Medicare reimbursements (MRs) to MHMH for enrollees who live in the specified HSA. MHMH received $5,190,000 in Medicare reimbursements for serving Medicare enrollees who lived in the Springfield, Vermont hospital service area.

Column 8 (MHMH % of HSAs MRs) gives the percentage of all Medicare reimbursements (MRs) benefiting enrollees of an HSA that were received by MHMH. Mary Hitchcock Memorial Hospital received 33.9% of Medicare Reimbursements paid for the benefit of enrollees in the Springfield, Vermont HSA in 1992-93.

Column 9 (MPDs in any HOSP for MEs in the HSA) gives the Medicare patient days (MPDs) spent in any hospital (HOSP) by the Medicare enrollees (MEs) living in the HSA. Medicare enrollees from the Springfield, Vermont HSA spent 22,661 days in the hospital in 1992-93.

Column 10 (MPDs in MHMH for MEs in the HSA) gives the Medicare patient days (MPDs) spent in MHMH by Medicare enrollees of the HSA. Medicare enrollees of the Springfield, Vermont HSA spent 5,375 days at MHMH in 1992-93.

Column 11 (MHMH % of HSAs MPDs) gives the percentage of all patient days spent by enrollees living in an HSA that were spent at MHMH. Mary Hitchcock Memorial Hospital provided 23.7% of the patient days used by Medicare enrollees living in the Springfield, Vermont HSA during 1992-93.

TABLE 6

Hospital Bed Allocation and Medicare Reimbursements for Inpatient Services by Hospital Service Area and Hospital by Location

		1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Bridgeport, CT	**299,628**									
Hospitals Within HSA										
Bridgeport Hospital		146.7	87.3	93.28	83.0	505	440.6	50.2	77.44	48.6
St Vincents Medical Center		123.1	86.6	82.12	78.0	391	338.6	41.8	64.06	40.2
Hospitals Outside HSA										
Yale New Haven Hospital		136.7	3.3	150.60	3.9	777	25.7	1.8	5.85	3.7
Norwalk Hospital		88.1	3.9	57.25	3.7	349	13.4	1.3	2.14	1.3
All Others							51.2	4.9	9.99	6.3
All Hospitals							869.5	100.0	159.49	100.0
Bristol, CT	**76,599**									
Hospitals Within HSA										
Bristol Hospital		55.8	82.5	32.87	82.8	168	138.7	75.5	27.21	63.9
Hospitals Outside HSA										
St Francis Hospital & Medical Center		133.5	2.4	132.17	4.2	534	13.0	5.3	5.55	13.0
Hartford Hospital		196.2	1.2	178.28	1.4	850	10.1	3.8	2.53	5.9
All Others							43.1	15.3	7.31	17.1
All Hospitals							204.9	100.0	42.59	100.0
Danbury, CT	**159,854**									
Hospitals Within HSA										
Danbury Hospital		92.0	71.4	64.88	71.7	458	327.0	81.1	46.49	74.9
Hospitals Outside HSA										
Yale New Haven Hospital		136.7	2.2	150.60	3.6	777	17.4	3.8	5.40	8.7
Bridgeport Hospital		146.7	0.8	93.28	1.4	505	3.9	1.4	1.26	2.0
All Others							48.1	13.7	8.93	14.4
All Hospitals							396.4	100.0	62.09	100.0
Derby, CT	**89,022**									
Hospitals Within HSA										
Griffin Hospital		48.3	88.6	29.16	88.3	160	141.8	65.0	25.74	54.1
Hospitals Outside HSA										
Hospital Of St Raphael		183.7	3.7	157.42	5.5	491	17.9	10.2	8.72	18.3
Bridgeport Hospital		146.7	4.0	93.28	4.7	505	19.9	8.8	4.40	9.3
All Others							43.9	16.0	8.71	18.3
All Hospitals							223.5	100.0	47.57	100.0
Greenwich, CT	**58,506**									
Hospitals Within HSA										
Greenwich Hospital Association		51.8	74.0	33.21	74.3	174	128.8	77.3	24.66	71.4
Hospitals Outside HSA										
Hospital Of St Raphael		183.7	0.3	157.42	0.8	491	1.4	1.1	1.27	3.7
St Joseph Medical Center, Inc		50.5	3.7	28.14	3.8	180	6.7	3.8	1.06	3.1
All Others							42.0	17.9	7.56	21.9
All Hospitals							178.9	100.0	34.55	100.0

		1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Hartford, CT	**511,789**									
Hospitals Within HSA										
Hartford Hospital		196.2	73.2	178.28	65.1	850	622.2	41.8	116.08	41.8
St Francis Hospital & Medical Center		133.5	73.2	132.17	63.5	534	390.9	28.5	83.98	30.3
Mt Sinai Hospital		37.6	86.4	30.93	86.3	237	204.8	9.5	26.69	9.6
John Dempsey Hospital		24.4	64.3	22.86	63.6	232	149.2	4.6	14.54	5.2
Hospitals Outside HSA										
Manchester Memorial Hospital		55.2	27.2	34.19	25.7	218	59.3	4.4	8.77	3.2
New Britain General Hospital		87.5	12.6	57.93	12.5	316	39.9	3.2	7.25	2.6
All Others							115.8	8.0	20.32	7.3
All Hospitals							1,582.1	100.0	277.64	100.0
Manchester, CT	**85,015**									
Hospitals Within HSA										
Manchester Memorial Hospital		55.2	58.0	34.19	59.3	218	126.3	65.1	20.27	51.6
Hospitals Outside HSA										
St Francis Hospital & Medical Center		133.5	4.5	132.17	6.4	534	24.2	12.3	8.48	21.6
Hartford Hospital		196.2	2.9	178.28	3.2	850	24.2	11.4	5.73	14.6
All Others							29.0	11.2	4.78	12.2
All Hospitals							203.7	100.0	39.27	100.0
Meriden, CT	**100,279**									
Hospitals Within HSA										
Veterans Memorial Medical Center		58.5	83.4	42.93	82.5	136	113.4	75.9	35.41	66.9
Hospitals Outside HSA										
Yale New Haven Hospital		136.7	3.4	150.60	4.1	777	26.7	7.3	6.23	11.8
Hospital Of St Raphael		183.7	1.5	157.42	2.1	491	7.3	4.2	3.38	6.4
All Others							34.6	12.5	7.94	15.0
All Hospitals							182.0	100.0	52.96	100.0
Middletown, CT	**158,987**									
Hospitals Within HSA										
Middlesex Hospital		64.9	82.0	51.95	81.7	198	162.3	66.1	42.44	61.1
Hospitals Outside HSA										
Hartford Hospital		196.2	4.7	178.28	6.1	850	40.1	11.5	10.93	15.7
Yale New Haven Hospital		136.7	1.9	150.60	2.3	777	14.6	3.2	3.48	5.0
All Others							58.9	19.3	12.66	18.2
All Hospitals							275.9	100.0	69.51	100.0
Milford, CT	**49,940**									
Hospitals Within HSA										
Milford Hospital		32.4	70.7	17.60	71.7	96	67.9	59.0	12.63	47.4
Hospitals Outside HSA										
Hospital Of St Raphael		183.7	2.1	157.42	3.0	491	10.3	9.9	4.65	17.5
Yale New Haven Hospital		136.7	2.6	150.60	2.7	777	20.1	9.1	4.12	15.5
All Others							30.1	22.0	5.23	19.7
All Hospitals							128.4	100.0	26.62	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
New Britain, CT 109,594									
Hospitals Within HSA									
New Britain General Hospital	87.5	76.3	57.93	75.1	316	241.1	76.9	43.52	67.0
Hospitals Outside HSA									
Hartford Hospital	196.2	3.5	178.28	5.2	850	30.0	8.0	9.19	14.1
St Francis Hospital & Medical Center	133.5	2.2	132.17	3.1	534	11.7	3.4	4.05	6.2
All Others						47.4	11.8	8.20	12.6
All Hospitals						330.2	100.0	64.96	100.0
New Haven, CT 386,607									
Hospitals Within HSA									
Hospital Of St Raphael	183.7	81.8	157.42	70.8	491	401.4	56.9	111.48	52.3
Yale New Haven Hospital	136.7	63.8	150.60	55.3	777	495.8	33.1	83.28	39.1
Hospitals Outside HSA									
Middlesex Hospital	64.9	7.3	51.95	7.8	198	14.5	1.8	4.04	1.9
Milford Hospital	32.4	18.8	17.60	17.8	96	18.1	2.3	3.13	1.5
All Others						62.3	5.9	11.09	5.2
All Hospitals						992.1	100.0	213.02	100.0
New London, CT 154,948									
Hospitals Within HSA									
Lawrence & Memorial Hospital	72.3	84.5	43.75	84.6	298	251.7	73.1	37.02	62.4
Hospitals Outside HSA									
Yale New Haven Hospital	136.7	3.4	150.60	4.8	777	26.3	5.5	7.20	12.1
William W Backus Hospital	56.7	9.8	33.04	10.7	185	18.2	6.7	3.54	6.0
All Others						52.6	14.7	11.53	19.5
All Hospitals						348.8	100.0	59.30	100.0
New Milford, CT 43,274									
Hospitals Within HSA									
New Milford Hospital	17.7	72.3	13.76	72.6	85	61.5	51.5	9.98	52.3
Hospitals Outside HSA									
Danbury Hospital	92.0	4.8	64.88	4.8	458	22.2	17.9	3.09	16.2
Yale New Haven Hospital	136.7	0.4	150.60	0.9	777	3.5	2.4	1.38	7.2
All Others						27.8	28.1	4.65	24.3
All Hospitals						115.0	100.0	19.09	100.0
Norwalk, CT 145,346									
Hospitals Within HSA									
Norwalk Hospital	88.1	82.9	57.25	83.0	349	289.4	77.2	47.49	70.4
Hospitals Outside HSA									
St Vincents Medical Center	123.1	1.9	82.12	3.9	391	7.3	2.4	3.20	4.7
Bridgeport Hospital	146.7	1.7	93.28	3.0	505	8.6	2.6	2.81	4.2
All Others						75.9	17.8	14.00	20.8
All Hospitals						381.2	100.0	67.50	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Norwich, CT 70,355									
Hospitals Within HSA									
William W Backus Hospital	56.7	74.7	33.04	72.8	185	138.2	79.2	24.05	67.7
Hospitals Outside HSA									
Hartford Hospital	196.2	1.0	178.28	1.5	850	8.8	3.8	2.58	7.3
Yale New Haven Hospital	136.7	1.3	150.60	1.5	777	9.9	3.3	2.33	6.6
All Others						31.0	13.7	6.57	18.5
All Hospitals						187.9	100.0	35.52	100.0
Putnam, CT 67,281									
Hospitals Within HSA									
Day Kimball Hospital	27.2	90.7	18.55	91.1	124	112.5	61.8	16.90	51.7
Hospitals Outside HSA									
University Of Massachusetts Med Ctr	71.7	5.3	92.98	6.4	408	21.6	9.5	5.95	18.2
William W Backus Hospital	56.7	6.3	33.04	6.3	185	11.6	8.9	2.09	6.4
All Others						33.5	19.8	7.76	23.8
All Hospitals						179.2	100.0	32.70	100.0
Rockville, CT 52,009									
Hospitals Within HSA									
Rockville General Hospital	21.8	69.4	14.85	65.4	118	81.8	57.6	9.72	48.7
Hospitals Outside HSA									
St Francis Hospital & Medical Center	133.5	2.2	132.17	2.9	534	11.7	11.2	3.88	19.4
Manchester Memorial Hospital	55.2	6.5	34.19	6.5	218	14.2	13.7	2.23	11.2
All Others						22.6	17.4	4.13	20.7
All Hospitals						130.3	100.0	19.96	100.0
Sharon, CT 38,423									
Hospitals Within HSA									
Sharon Hospital	22.9	82.5	11.80	85.8	78	64.3	52.9	10.13	43.2
Hospitals Outside HSA									
St Francis Hospital & Medical Center	133.5	0.7	132.17	1.3	534	3.5	2.4	1.67	7.1
New Milford Hospital	17.7	9.2	13.76	9.7	85	7.8	4.6	1.33	5.7
All Others						61.5	40.1	10.29	44.0
All Hospitals						137.1	100.0	23.42	100.0
Southington, CT 38,591									
Hospitals Within HSA									
Bradley Memorial Hospital	22.6	72.9	14.40	71.8	74	54.0	59.5	10.35	48.3
Hospitals Outside HSA									
Hospital Of St Raphael	183.7	0.8	157.42	1.9	491	4.1	5.5	3.04	14.2
New Britain General Hospital	87.5	3.9	57.93	4.3	316	12.4	12.4	2.49	11.6
All Others						24.2	22.7	5.57	25.9
All Hospitals						94.7	100.0	21.44	100.0
Stafford Springs, CT 72,350									
Hospitals Within HSA									
Johnson Memorial Hospital	26.4	79.7	16.68	77.8	86	68.6	51.3	12.98	42.1
Hospitals Outside HSA									
St Francis Hospital & Medical Center	133.5	4.5	132.17	4.9	534	23.9	14.6	6.46	21.0
Baystate Medical Center	127.7	2.3	145.11	2.1	661	15.4	7.3	3.11	10.1
All Others						47.4	26.9	8.26	26.8
All Hospitals						155.3	100.0	30.80	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Stamford, CT 126,055									
Hospitals Within HSA									
Stamford Hospital	54.9	81.8	37.03	81.1	245	200.5	43.8	30.02	43.8
St Joseph Medical Center, Inc	50.5	83.2	28.14	84.2	180	149.8	40.9	23.68	34.6
Hospitals Outside HSA									
St Vincents Medical Center	123.1	1.1	82.12	2.7	391	4.2	1.3	2.23	3.3
Norwalk Hospital	88.1	3.2	57.25	3.0	349	11.0	2.7	1.72	2.5
All Others						51.1	11.4	10.86	15.8
All Hospitals						416.6	100.0	68.51	100.0
Torrington, CT 56,737									
Hospitals Within HSA									
Charlotte Hungerford Hospital	50.9	82.7	29.31	83.4	159	131.4	80.5	24.43	68.8
Hospitals Outside HSA									
Hartford Hospital	196.2	1.8	178.28	2.6	850	15.1	6.6	4.65	13.1
Waterbury Hospital Health Center	88.5	1.1	64.68	1.5	311	3.5	1.9	0.97	2.7
All Others						32.6	11.0	5.49	15.5
All Hospitals						182.6	100.0	35.54	100.0
Waterbury, CT 255,132									
Hospitals Within HSA									
St Marys Hospital	91.5	94.6	61.21	94.3	294	278.2	41.8	57.71	36.5
Waterbury Hospital Health Center	88.5	89.9	64.68	88.2	311	279.6	38.4	57.05	36.1
Hospitals Outside HSA									
Hospital Of St Raphael	183.7	4.4	157.42	8.2	491	21.5	3.9	12.98	8.2
Yale New Haven Hospital	136.7	3.3	150.60	4.1	777	25.9	2.2	6.11	3.9
All Others						113.2	13.7	24.14	15.3
All Hospitals						718.4	100.0	157.98	100.0
Willimantic, CT 75,325									
Hospitals Within HSA									
Windham Community Mem Hosp	29.0	88.4	17.73	88.1	130	114.9	67.3	15.61	55.1
Hospitals Outside HSA									
Hartford Hospital	196.2	1.7	178.28	2.3	850	14.5	8.8	4.10	14.5
St Francis Hospital & Medical Center	133.5	1.1	132.17	1.7	534	6.0	4.0	2.30	8.1
All Others						34.5	20.0	6.30	22.3
All Hospitals						169.9	100.0	28.32	100.0
Winsted, CT 18,623									
Hospitals Within HSA									
Winsted Memorial Hospital	9.3	77.5	5.73	77.6	60	46.5	59.3	4.44	53.1
Hospitals Outside HSA									
Charlotte Hungerford Hospital	50.9	5.3	29.31	5.2	159	8.5	22.3	1.53	18.3
Hartford Hospital	196.2	0.5	178.28	0.6	850	3.9	7.5	1.12	13.4
All Others						6.7	10.9	1.28	15.3
All Hospitals						65.6	100.0	8.37	100.0

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Augusta, ME 68,143									
Hospitals Within HSA									
Kennebec Valley Medical Center	32.3	87.6	16.26	87.0	145	127.0	68.5	14.14	61.0
Hospitals Outside HSA									
Maine Medical Center	147.9	2.5	111.83	3.2	598	14.8	8.9	3.63	15.7
Mid-Maine Medical Center	49.5	5.3	24.04	4.9	227	12.1	6.4	1.18	5.1
All Others						33.9	16.3	4.23	18.2
All Hospitals						187.8	100.0	23.17	100.0
Bangor, ME 121,418									
Hospitals Within HSA									
Eastern Maine Medical Center	91.2	54.2	58.49	44.9	386	209.4	60.7	26.26	63.2
St Joseph Hospital	34.3	76.1	16.10	70.5	96	73.0	32.0	11.36	27.3
Hospitals Outside HSA									
All Others						28.4	7.3	3.95	9.5
All Hospitals						310.8	100.0	41.56	100.0
Bar Harbor, ME 9,698									
Hospitals Within HSA									
Mt Desert Island Hospital	9.7	68.7	4.36	68.5	37	25.4	62.6	2.99	50.7
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	2.0	58.49	2.6	386	7.9	17.4	1.54	26.1
Maine Coast Memorial Hospital	13.0	8.0	6.09	8.8	64	5.1	9.7	0.53	9.0
All Others						4.1	10.2	0.83	14.1
All Hospitals						42.5	100.0	5.90	100.0
Belfast, ME 18,596									
Hospitals Within HSA									
Waldo County General Hospital	10.8	81.3	4.80	81.4	49	39.8	61.5	3.91	51.9
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	3.0	58.49	3.1	386	11.5	19.1	1.80	23.8
Penobscot Bay Medical Center	30.3	2.4	17.82	2.5	95	2.3	5.1	0.44	5.9
All Others						8.8	14.3	1.40	18.5
All Hospitals						62.4	100.0	7.53	100.0
Biddeford, ME 61,604									
Hospitals Within HSA									
Southern Maine Medical Center	38.5	84.2	18.33	84.9	150	126.3	68.4	15.55	58.5
Hospitals Outside HSA									
Maine Medical Center	147.9	5.6	111.83	5.8	598	33.7	17.6	6.45	24.3
Brighton Medical Center	32.5	8.4	18.02	8.8	120	10.1	5.7	1.59	6.0
All Others						15.2	8.3	3.01	11.3
All Hospitals						185.3	100.0	26.60	100.0
Blue Hill, ME 8,522									
Hospitals Within HSA									
Blue Hill Memorial Hospital	5.1	73.8	2.49	72.8	26	19.2	48.7	1.81	39.4
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	2.3	58.49	2.6	386	8.7	26.5	1.51	32.7
Maine Coast Memorial Hospital	13.0	6.1	6.09	6.4	64	3.9	10.2	0.39	8.5
All Others						4.5	14.6	0.89	19.4
All Hospitals						36.3	100.0	4.60	100.0

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Boothbay Harbor, ME 5,640									
Hospitals Within HSA									
St Andrews Hospital	2.2	80.2	1.59	83.4	22	17.6	41.8	1.33	40.3
Hospitals Outside HSA									
Maine Medical Center	147.9	0.9	111.83	0.8	598	5.3	30.5	0.94	28.6
Miles Memorial Hospital	8.8	5.4	5.09	6.1	27	1.5	11.0	0.31	9.5
All Others						3.4	16.6	0.71	21.6
All Hospitals						27.8	100.0	3.30	100.0
Bridgton, ME 14,858									
Hospitals Within HSA									
Northern Cumberland Mem Hospital	11.4	67.3	5.51	65.5	40	26.9	54.5	3.61	43.7
Hospitals Outside HSA									
Maine Medical Center	147.9	1.8	111.83	2.0	598	10.8	18.9	2.26	27.3
Brighton Medical Center	32.5	1.9	18.02	2.5	120	2.2	4.3	0.45	5.4
All Others						14.5	22.3	1.94	23.6
All Hospitals						54.4	100.0	8.26	100.0
Brunswick, ME 69,003									
Hospitals Within HSA									
Mid Coast Hospital	24.5	85.0	12.80	85.5	115	97.7	53.6	10.95	45.4
Parkview Memorial Hospital	7.0	81.4	3.97	77.4	55	44.8	14.7	3.07	12.7
Hospitals Outside HSA									
Maine Medical Center	147.9	4.7	111.83	5.6	598	28.1	17.9	6.23	25.8
Mercy Hospital	49.4	1.8	25.20	2.3	174	3.2	2.3	0.58	2.4
All Others						19.9	11.5	3.30	13.7
All Hospitals						193.7	100.0	24.13	100.0
Calais, ME 14,450									
Hospitals Within HSA									
Calais Regional Hospital	11.1	92.6	4.44	93.3	49	45.4	59.4	4.14	46.7
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	5.0	58.49	5.5	386	19.3	26.4	3.19	36.0
St Joseph Hospital	34.3	2.8	16.10	3.1	96	2.7	5.5	0.50	5.7
All Others						6.1	8.8	1.03	11.7
All Hospitals						73.5	100.0	8.87	100.0
Caribou, ME 27,267									
Hospitals Within HSA									
Cary Medical Center	17.8	77.5	7.97	73.6	65	50.4	70.3	5.87	64.6
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	1.5	58.49	2.3	386	5.6	6.8	1.36	14.9
Aroostook Medical Center,The	25.4	12.1	7.94	11.3	116	14.0	15.6	0.90	9.9
All Others						7.4	7.4	0.97	10.6
All Hospitals						77.4	100.0	9.09	100.0

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Damariscotta, ME 9,152									
Hospitals Within HSA									
Miles Memorial Hospital	8.8	62.9	5.09	61.9	27	17.0	59.6	3.15	48.6
Hospitals Outside HSA									
Maine Medical Center	147.9	1.3	111.83	1.7	598	8.0	21.2	1.85	28.5
Penobscot Bay Medical Center	30.3	1.3	17.82	2.1	95	1.3	4.3	0.37	5.7
All Others						6.7	14.8	1.11	17.1
All Hospitals						33.0	100.0	6.48	100.0
Dover-Foxcroft, ME 21,483									
Hospitals Within HSA									
Mayo Regional Hospital-Had 4	11.4	80.4	6.36	80.5	52	41.8	55.3	5.12	49.6
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	4.3	58.49	4.8	386	16.4	23.4	2.81	27.3
St Joseph Hospital	34.3	3.0	16.10	4.6	96	2.9	6.2	0.74	7.1
All Others						11.6	15.2	1.66	16.1
All Hospitals						72.7	100.0	10.33	100.0
Ellsworth, ME 21,025									
Hospitals Within HSA									
Maine Coast Memorial Hospital	13.0	69.9	6.09	67.4	64	44.7	49.9	4.11	41.7
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	4.7	58.49	5.5	386	18.1	23.4	3.19	32.4
Mt Desert Island Hospital	9.7	18.4	4.36	21.0	37	6.8	9.8	0.92	9.3
All Others						12.1	16.9	1.65	16.7
All Hospitals						81.7	100.0	9.86	100.0
Farmington, ME 35,630									
Hospitals Within HSA									
Franklin Memorial Hospital	14.3	87.1	8.75	86.7	70	61.0	54.6	7.59	50.5
Hospitals Outside HSA									
Maine Medical Center	147.9	1.9	111.83	2.6	598	11.3	12.2	2.89	19.3
Central Maine Medical Center	53.5	4.9	28.79	5.9	250	12.3	11.6	1.70	11.3
All Others						22.9	21.6	2.84	18.9
All Hospitals						107.5	100.0	15.01	100.0
Fort Kent, ME 13,563									
Hospitals Within HSA									
Northern Maine Medical Center	5.7	90.9	3.47	91.3	52	47.3	55.5	3.17	53.7
Hospitals Outside HSA									
Cary Medical Center	17.8	8.6	7.97	11.3	65	5.6	16.6	0.90	15.2
Eastern Maine Medical Center	91.2	0.8	58.49	1.3	386	2.9	7.4	0.75	12.8
All Others						8.5	20.5	1.08	18.3
All Hospitals						64.3	100.0	5.90	100.0
Greenville, ME 3,790									
Hospitals Within HSA									
Charles A Dean Memorial Hospital	2.8	87.0	1.12	84.8	14	12.2	61.4	0.95	46.9
Hospitals Outside HSA									
Mayo Regional Hospital-Had 4	11.4	4.4	6.36	5.5	52	2.3	12.6	0.35	17.3
Eastern Maine Medical Center	91.2	0.4	58.49	0.5	386	1.4	8.4	0.29	14.4
All Others						3.1	17.6	0.44	21.5
All Hospitals						19.0	100.0	2.02	100.0

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Houlton, ME	**18,053**									
Hospitals Within HSA										
Houlton Regional Hospital		14.6	89.9	6.65	89.2	49	44.0	71.7	5.93	60.7
Hospitals Outside HSA										
Eastern Maine Medical Center		91.2	3.0	58.49	3.9	386	11.7	15.1	2.29	23.4
St Joseph Hospital		34.3	0.9	16.10	1.6	96	0.8	1.6	0.26	2.7
All Others							9.8	11.5	1.29	13.2
All Hospitals							66.3	100.0	9.77	100.0
Lewiston, ME	**112,342**									
Hospitals Within HSA										
Central Maine Medical Center		53.5	76.3	28.79	73.9	250	190.6	50.7	21.29	44.8
St Marys Regional Medical Center		31.6	84.6	17.00	85.2	190	160.7	33.3	14.49	30.5
Hospitals Outside HSA										
Maine Medical Center		147.9	3.9	111.83	6.2	598	23.3	7.2	6.96	14.6
Kennebec Valley Medical Center		32.3	2.6	16.26	3.2	145	3.8	1.1	0.52	1.1
All Others							28.2	7.8	4.27	9.0
All Hospitals							406.6	100.0	47.52	100.0
Lincoln, ME	**14,280**									
Hospitals Within HSA										
Penobscot Valley Hospital		6.2	89.8	3.43	90.2	33	29.6	52.9	3.09	46.8
Hospitals Outside HSA										
Eastern Maine Medical Center		91.2	3.0	58.49	3.6	386	11.7	26.5	2.11	31.8
St Joseph Hospital		34.3	1.7	16.10	2.4	96	1.7	5.6	0.38	5.8
All Others							7.4	15.0	1.03	15.6
All Hospitals							50.4	100.0	6.61	100.0
Machias, ME	**15,962**									
Hospitals Within HSA										
Down East Community Hospital		10.6	81.8	4.92	80.5	38	31.1	55.4	3.96	48.5
Hospitals Outside HSA										
Eastern Maine Medical Center		91.2	4.5	58.49	4.4	386	17.3	26.2	2.59	31.7
Maine Coast Memorial Hospital		13.0	6.8	6.09	7.3	64	4.4	5.7	0.44	5.5
All Others							7.9	12.8	1.16	14.3
All Hospitals							60.7	100.0	8.16	100.0
Millinocket, ME	**12,843**									
Hospitals Within HSA										
Millinocket Regional Hospital		8.1	81.0	4.54	80.9	50	40.5	62.8	3.67	56.9
Hospitals Outside HSA										
Eastern Maine Medical Center		91.2	2.6	58.49	3.1	386	9.8	22.2	1.79	27.8
Houlton Regional Hospital		14.6	3.0	6.65	3.4	49	1.5	4.1	0.22	3.5
All Others							5.1	10.9	0.76	11.9
All Hospitals							56.9	100.0	6.46	100.0

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Norway, ME 25,007									
Hospitals Within HSA									
Stephens Memorial Hospital	16.9	78.4	8.40	77.3	50	39.2	67.6	6.50	55.9
Hospitals Outside HSA									
Maine Medical Center	147.9	1.6	111.83	2.1	598	9.4	11.9	2.38	20.5
Central Maine Medical Center	53.5	3.7	28.79	3.9	250	9.1	10.0	1.13	9.8
All Others						9.8	10.6	1.60	13.8
All Hospitals						67.5	100.0	11.61	100.0
Pittsfield, ME 17,534									
Hospitals Within HSA									
Sebasticook Valley Hospital	6.7	83.9	3.01	81.8	28	23.5	44.0	2.46	36.3
Hospitals Outside HSA									
Mid-Maine Medical Center	49.5	4.9	24.04	5.7	227	11.2	19.2	1.36	20.0
Eastern Maine Medical Center	91.2	2.0	58.49	2.3	386	7.9	14.6	1.33	19.5
All Others						14.4	22.2	1.63	24.2
All Hospitals						57.0	100.0	6.79	100.0
Portland, ME 215,490									
Hospitals Within HSA									
Maine Medical Center	147.9	55.3	111.83	45.5	598	330.5	49.8	50.87	53.7
Mercy Hospital	49.4	86.6	25.20	83.3	174	150.7	26.0	20.99	22.1
Brighton Medical Center	32.5	81.2	18.02	79.3	120	97.4	16.1	14.29	15.1
Hospitals Outside HSA									
Northern Cumberland Mem Hospital	11.4	19.1	5.51	18.8	40	7.6	1.3	1.03	1.1
All Others						49.0	6.8	7.61	8.0
All Hospitals						635.2	100.0	94.79	100.0
Presque Isle, ME 28,392									
Hospitals Within HSA									
Aroostook Medical Center,The	25.4	80.1	7.94	80.4	116	92.9	78.1	6.38	61.1
Hospitals Outside HSA									
Eastern Maine Medical Center	91.2	2.0	58.49	2.9	386	7.8	7.1	1.67	16.0
Cary Medical Center	17.8	12.7	7.97	13.6	65	8.2	8.7	1.08	10.3
All Others						7.5	6.2	1.32	12.6
All Hospitals						116.4	100.0	10.45	100.0
Rockland, ME 44,103									
Hospitals Within HSA									
Penobscot Bay Medical Center	30.3	89.9	17.82	88.6	95	85.4	76.0	15.79	69.2
Hospitals Outside HSA									
Maine Medical Center	147.9	2.4	111.83	3.1	598	14.2	9.8	3.50	15.4
Miles Memorial Hospital	8.8	10.3	5.09	9.9	27	2.8	2.5	0.50	2.2
All Others						18.8	11.7	3.01	13.2
All Hospitals						121.2	100.0	22.80	100.0

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Rumford, ME 16,930									
Hospitals Within HSA									
Rumford Community Hospital	9.3	90.5	5.39	89.6	34	30.8	46.6	4.83	42.9
Hospitals Outside HSA									
Maine Medical Center	147.9	1.7	111.83	2.1	598	10.3	14.2	2.39	21.3
Central Maine Medical Center	53.5	6.2	28.79	6.9	250	15.5	18.5	1.98	17.6
All Others						17.8	20.8	2.05	18.2
All Hospitals						74.4	100.0	11.25	100.0
Sanford, ME 44,589									
Hospitals Within HSA									
Henrietta D Goodall Hospital	22.0	86.3	7.16	84.6	68	58.7	62.4	6.06	42.8
Hospitals Outside HSA									
Maine Medical Center	147.9	3.4	111.83	3.5	598	20.2	16.4	3.90	27.5
Southern Maine Medical Center	38.5	3.9	18.33	4.3	150	5.9	5.0	0.79	5.6
All Others						20.3	16.2	3.40	24.1
All Hospitals						105.1	100.0	14.16	100.0
Skowhegan, ME 29,758									
Hospitals Within HSA									
Redington Fairview General Hospital	19.6	89.0	7.77	88.9	72	64.1	60.8	6.91	48.5
Hospitals Outside HSA									
Mid-Maine Medical Center	49.5	12.0	24.04	13.3	227	27.2	20.8	3.19	22.4
Maine Medical Center	147.9	0.8	111.83	1.1	598	5.0	4.3	1.22	8.6
All Others						21.5	14.1	2.93	20.5
All Hospitals						117.8	100.0	14.25	100.0
Waterville, ME 64,687									
Hospitals Within HSA									
Mid-Maine Medical Center	49.5	64.8	24.04	63.9	227	147.2	70.8	15.36	63.5
Waterville Osteopathic Hospital	10.4	65.1	4.84	62.2	78	50.7	15.0	3.02	12.5
Hospitals Outside HSA									
Maine Medical Center	147.9	1.4	111.83	2.2	598	8.1	4.4	2.48	10.3
Eastern Maine Medical Center	91.2	0.6	58.49	1.0	386	2.3	1.2	0.59	2.5
All Others						17.3	8.6	2.74	11.3
All Hospitals						225.6	100.0	24.19	100.0
York, ME 30,504									
Hospitals Within HSA									
York Hospital	19.1	75.1	11.34	69.4	61	45.8	54.3	7.87	45.9
Hospitals Outside HSA									
Portsmouth Regional Hospital	28.4	12.7	19.38	12.8	114	14.5	13.7	2.48	14.5
Maine Medical Center	147.9	1.4	111.83	1.9	598	8.5	8.0	2.10	12.2
All Others						25.5	24.0	4.69	27.4
All Hospitals						94.3	100.0	17.14	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Arlington, MA 73,533									
Hospitals Within HSA									
Symmes Hospital Inc,The	43.5	67.7	27.77	68.3	109	73.8	45.8	18.97	36.9
Hospitals Outside HSA									
Mt Auburn Hosp	74.7	10.6	62.12	11.3	286	30.3	12.3	6.99	13.6
Mary And Arthur Clapham Hospital	83.6	7.0	97.70	6.7	272	19.1	9.1	6.57	12.8
All Others						89.9	32.7	18.84	36.7
All Hospitals						213.1	100.0	51.37	100.0
Athol, MA 23,913									
Hospitals Within HSA									
Athol Memorial Hospital	17.2	91.3	8.40	91.5	48	43.8	63.1	7.69	47.5
Hospitals Outside HSA									
University Of Massachusetts Med Ctr	71.7	2.6	92.98	2.7	408	10.4	7.4	2.49	15.4
Burbank Hospital	45.0	2.9	28.35	3.7	175	5.1	5.2	1.05	6.5
All Others						26.5	24.3	4.94	30.6
All Hospitals						85.8	100.0	16.18	100.0
Attleboro, MA 102,110									
Hospitals Within HSA									
Sturdy Memorial Hospital	38.6	82.8	22.66	83.3	178	147.5	51.0	18.87	42.3
Hospitals Outside HSA									
Southwood Community Hospital	30.3	17.0	19.76	18.4	182	31.0	8.2	3.63	8.1
Miriam Hospital	88.8	2.8	72.21	4.1	247	6.8	3.9	2.92	6.6
All Others						91.5	36.9	19.19	43.0
All Hospitals						276.8	100.0	44.60	100.0
Ayer, MA 57,962									
Hospitals Within HSA									
Nashoba Community Hospital Inc,The	17.1	68.0	12.14	67.5	54	36.7	48.5	8.19	43.2
Hospitals Outside HSA									
New England Deaconess Hospital	89.5	1.2	103.80	1.8	345	4.2	4.5	1.91	10.1
Emerson Hospital	34.2	6.5	25.59	6.6	182	11.9	9.3	1.70	9.0
All Others						38.9	37.7	7.14	37.8
All Hospitals						91.7	100.0	18.96	100.0
Beverly, MA 111,015									
Hospitals Within HSA									
Beverly Hospital	72.8	76.1	41.08	76.0	242	184.2	69.8	31.22	58.1
Hospitals Outside HSA									
Salem Hospital Corporation,The	77.1	8.9	54.77	9.4	334	29.8	8.7	5.12	9.5
Massachusetts General Hospital	240.3	1.2	266.65	1.5	984	11.8	3.6	3.95	7.4
All Others						60.4	17.9	13.48	25.1
All Hospitals						286.2	100.0	53.78	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Boston, MA 768,694									
Hospitals Within HSA									
Massachusetts General Hospital	240.3	32.3	266.65	26.7	984	318.0	13.6	71.14	14.8
Beth Israel Hospital	113.0	59.2	131.56	52.4	462	273.3	11.7	68.94	14.3
St Elizabeths Hospital	112.8	48.9	104.34	42.1	415	203.1	9.7	43.94	9.1
Faulkner Hospital	54.9	84.0	44.46	82.0	189	158.8	8.1	36.47	7.6
Brigham And Womans Hospital	101.7	31.8	147.34	24.6	751	238.8	5.7	36.28	7.5
Carney Hospital	79.1	62.5	58.79	61.1	257	160.6	8.7	35.95	7.5
New England Medical Center Hospital	80.0	40.0	99.43	30.7	491	196.4	5.6	30.48	6.3
University Hospital	67.2	48.3	73.54	41.1	325	157.0	5.7	30.20	6.3
New England Deaconess Hospital	89.5	21.9	103.80	15.9	345	75.5	3.4	16.50	3.4
Boston City Hospital	20.5	92.8	17.92	91.7	312	289.5	3.3	16.44	3.4
New England Baptist Hospital	45.6	30.0	39.31	25.4	185	55.5	2.4	10.00	2.1
Others Within HSA	18.6	25.7	9.86	27.0	52	13.4	0.8	2.66	0.6
Hospitals Outside HSA									
Whidden Memorial Hospital	44.5	46.2	29.11	46.3	121	55.9	3.6	13.49	2.8
Newton-Wellesley Hospital	61.9	16.5	55.00	16.8	316	52.2	1.8	9.23	1.9
All Others						359.9	15.9	59.24	12.3
All Hospitals						2,607.9	100.0	480.94	100.0
Brockton, MA 239,486									
Hospitals Within HSA									
Brockton Hospital	66.9	82.0	41.54	81.8	271	222.3	29.8	33.98	26.5
Cardinal Cushing General Hospital	63.5	66.6	39.86	66.3	225	149.8	23.0	26.41	20.6
Hospitals Outside HSA									
Goddard Memorial Hospital	49.8	61.5	25.95	59.8	276	169.6	16.6	15.53	12.1
New England Deaconess Hospital	89.5	6.4	103.80	7.5	345	21.9	3.1	7.83	6.1
All Others						205.5	27.4	44.29	34.6
All Hospitals						769.1	100.0	128.02	100.0
Burlington, MA 23,093									
Hospitals Within HSA									
Mary And Arthur Clapham Hospital	83.6	4.8	97.70	4.0	272	12.9	40.3	3.90	48.4
Hospitals Outside HSA									
Winchester Hospital	49.0	5.3	32.06	5.2	186	9.8	26.2	1.66	20.5
Symmes Hospital Inc,The	43.5	1.0	27.77	1.2	109	1.1	4.3	0.33	4.1
All Others						11.4	29.3	2.17	27.0
All Hospitals						35.2	100.0	8.06	100.0
Cambridge, MA 152,358									
Hospitals Within HSA									
Mt Auburn Hosp	74.7	56.4	62.12	53.2	286	161.3	39.2	33.03	38.1
Cambridge Hospital,The	24.1	64.5	20.54	62.7	176	113.4	14.4	12.87	14.9
Hospitals Outside HSA									
St Elizabeths Hospital	112.8	9.7	104.34	9.1	415	40.1	10.1	9.49	11.0
Massachusetts General Hospital	240.3	3.4	266.65	2.9	984	33.5	7.6	7.66	8.8
All Others						132.6	28.6	23.63	27.3
All Hospitals						480.9	100.0	86.68	100.0

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Clinton, MA 19,287									
Hospitals Within HSA									
Clinton Hospital,The	19.2	44.0	9.01	48.2	49	21.5	50.7	4.34	40.9
Hospitals Outside HSA									
St Vincent Hospital	115.1	2.5	52.70	2.7	431	10.7	17.2	1.43	13.5
University Of Massachusetts Med Ctr	71.7	1.5	92.98	1.5	408	5.9	6.2	1.36	12.8
All Others						17.6	25.8	3.50	32.8
All Hospitals						55.7	100.0	10.62	100.0
Concord, MA 93,269									
Hospitals Within HSA									
Emerson Hospital	34.2	69.9	25.59	69.4	182	127.2	58.0	17.76	49.2
Hospitals Outside HSA									
St Elizabeths Hospital	112.8	1.4	104.34	2.8	415	5.6	3.7	2.89	8.0
Massachusetts General Hospital	240.3	0.7	266.65	0.9	984	6.9	4.1	2.27	6.3
All Others						55.6	34.2	13.16	36.5
All Hospitals						195.3	100.0	36.09	100.0
Everett, MA 35,493									
Hospitals Within HSA									
Whidden Memorial Hospital	44.5	39.8	29.11	39.8	121	48.1	44.4	11.58	38.4
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	1.8	266.65	1.8	984	18.1	11.1	4.78	15.8
Malden Hospital,The	38.9	12.7	26.80	14.0	192	24.4	12.4	3.74	12.4
All Others						52.5	32.0	10.06	33.4
All Hospitals						143.1	100.0	30.17	100.0
Fall River, MA 161,355									
Hospitals Within HSA									
Charlton Memorial Hospital	143.0	88.4	72.91	86.8	332	293.6	63.5	63.24	55.4
St Annes Hospital Corporation	52.4	90.9	26.43	91.5	177	161.0	23.9	24.18	21.2
Hospitals Outside HSA									
Rhode Island Hospital	172.9	2.1	157.27	3.0	709	15.0	1.8	4.71	4.1
Massachusetts General Hospital	240.3	1.3	266.65	1.7	984	13.2	1.6	4.61	4.0
All Others						76.5	9.2	17.36	15.2
All Hospitals						559.3	100.0	114.11	100.0
Falmouth, MA 66,543									
Hospitals Within HSA									
Falmouth Hospital	34.8	81.2	25.01	81.5	117	95.0	50.9	20.38	41.7
Hospitals Outside HSA									
Brigham And Womans Hospital	101.7	2.5	147.34	3.1	751	18.4	4.5	4.51	9.2
New England Deaconess Hospital	89.5	3.5	103.80	4.1	345	12.1	5.7	4.28	8.8
All Others						83.8	38.9	19.75	40.4
All Hospitals						209.3	100.0	48.93	100.0

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Fitchburg, MA	**55,412**									
Hospitals Within HSA										
Burbank Hospital		45.0	62.1	28.35	58.9	175	108.6	64.0	16.71	56.2
Hospitals Outside HSA										
University Of Massachusetts Med Ctr		71.7	4.7	92.98	4.9	408	19.0	7.7	4.51	15.2
Leominster Hospital		24.1	21.2	15.15	20.2	115	24.3	11.7	3.05	10.3
All Others							28.6	16.6	5.44	18.3
All Hospitals							180.5	100.0	29.72	100.0
Gardner, MA	**50,090**									
Hospitals Within HSA										
Henry Heywood Memorial Hospital		28.3	77.8	16.84	83.4	132	102.7	57.6	14.05	51.4
Hospitals Outside HSA										
Burbank Hospital		45.0	14.1	28.35	15.1	175	24.6	16.5	4.27	15.6
University Of Massachusetts Med Ctr		71.7	3.5	92.98	3.9	408	14.2	6.5	3.58	13.1
All Others							29.7	19.4	5.41	19.8
All Hospitals							171.2	100.0	27.32	100.0
Gloucester, MA	**36,198**									
Hospitals Within HSA										
Addison Gilbert Hospital		26.4	91.0	17.59	90.1	102	92.8	72.0	15.84	63.8
Hospitals Outside HSA										
Massachusetts General Hospital		240.3	1.2	266.65	1.5	984	12.2	8.9	4.02	16.2
Beverly Hospital		72.8	3.2	41.08	3.7	242	7.7	6.9	1.54	6.2
All Others							19.5	12.2	3.44	13.9
All Hospitals							132.2	100.0	24.84	100.0
Great Barrington, MA	**21,360**									
Hospitals Within HSA										
Fairview Hospital		12.5	71.5	7.88	70.8	42	30.0	46.0	5.58	41.3
Hospitals Outside HSA										
Berkshire Medical Center		86.3	4.5	57.79	5.5	329	14.9	20.3	3.16	23.4
Hillcrest Hospital		20.3	5.4	13.50	7.0	116	6.3	5.7	0.94	6.9
All Others							21.4	28.0	3.83	28.4
All Hospitals							72.6	100.0	13.52	100.0
Greenfield, MA	**60,801**									
Hospitals Within HSA										
Franklin Medical Center		26.9	89.2	19.34	88.3	119	106.2	67.0	17.08	59.7
Hospitals Outside HSA										
Baystate Medical Center		127.7	1.9	145.11	3.0	661	12.8	6.9	4.33	15.2
Mary Hitchcock Memorial Hospital		82.6	2.1	76.93	2.5	407	8.7	4.9	1.93	6.7
All Others							33.1	21.1	5.27	18.4
All Hospitals							160.8	100.0	28.61	100.0
Haverhill, MA	**77,130**									
Hospitals Within HSA										
Haverhill Municipal Hospital		45.7	87.0	28.42	84.8	153	133.1	66.0	24.09	60.4
Hospitals Outside HSA										
New England Deaconess Hospital		89.5	1.3	103.80	1.9	345	4.5	1.9	1.95	4.9
Holy Family Hospital & Medical Center		67.6	6.2	32.97	5.7	290	17.8	6.9	1.87	4.7
All Others							65.5	25.2	11.94	30.0
All Hospitals							220.9	100.0	39.86	100.0

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Holyoke, MA 67,693									
Hospitals Within HSA									
Holyoke Hospital Inc	60.8	60.9	28.44	60.9	225	136.9	58.2	17.31	45.7
Providence Hospital Inc,The	30.9	40.0	15.58	39.3	211	84.3	19.4	6.13	16.2
Hospitals Outside HSA									
Baystate Medical Center	127.7	4.8	145.11	5.8	661	31.4	9.6	8.39	22.2
Mercy Hospital	103.1	3.6	59.77	4.0	276	9.9	5.8	2.41	6.4
All Others						19.7	7.0	3.61	9.5
All Hospitals						282.2	100.0	37.85	100.0
Hyannis, MA 121,922									
Hospitals Within HSA									
Cape Cod Hospital	90.3	87.7	72.89	87.3	258	226.4	64.0	63.61	55.4
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	4.0	266.65	4.9	984	39.4	7.8	12.93	11.3
Brigham And Womans Hospital	101.7	5.2	147.34	6.9	751	38.7	4.2	10.10	8.8
All Others						128.5	24.1	28.14	24.5
All Hospitals						433.0	100.0	114.79	100.0
Lawrence, MA 122,521									
Hospitals Within HSA									
Lawrence General Hospital	63.5	69.6	36.88	67.8	267	185.8	49.9	25.00	44.5
Hospitals Outside HSA									
Holy Family Hospital & Medical Center	67.6	38.8	32.97	38.3	290	112.4	29.6	12.62	22.4
New England Deaconess Hospital	89.5	2.6	103.80	3.3	345	9.1	2.7	3.39	6.0
All Others						69.3	17.8	15.22	27.1
All Hospitals						376.6	100.0	56.23	100.0
Leominster, MA 38,145									
Hospitals Within HSA									
Leominster Hospital	24.1	61.9	15.15	61.3	115	71.2	57.5	9.29	48.3
Hospitals Outside HSA									
University Of Massachusetts Med Ctr	71.7	3.3	92.98	3.9	408	13.5	9.2	3.60	18.7
Burbank Hospital	45.0	8.9	28.35	9.7	175	15.5	15.4	2.75	14.3
All Others						18.1	17.9	3.61	18.7
All Hospitals						118.3	100.0	19.24	100.0
Lowell, MA 259,507									
Hospitals Within HSA									
Saints Memorial Medical Center Inc	59.1	91.2	35.00	91.4	183	166.9	33.5	32.00	29.0
Lowell General Hospital	37.1	94.2	21.91	93.5	208	196.0	21.7	20.49	18.6
St Josephs Hospital	30.9	93.7	18.91	94.2	167	156.5	18.0	17.81	16.1
Hospitals Outside HSA									
Mary And Arthur Clapham Hospital	83.6	9.9	97.70	10.4	272	26.9	5.1	10.16	9.2
Massachusetts General Hospital	240.3	1.4	266.65	1.6	984	13.8	2.1	4.30	3.9
All Others						138.3	19.6	25.71	23.3
All Hospitals						698.4	100.0	110.47	100.0

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Ludlow, MA 18,820									
Hospitals Within HSA									
Ludlow Hospital	15.2	35.3	7.40	34.5	45	15.9	42.9	2.55	27.3
Hospitals Outside HSA									
Baystate Medical Center	127.7	3.1	145.11	3.2	661	20.5	31.7	4.67	49.9
Mercy Hospital	103.1	1.8	59.77	1.8	276	5.0	15.0	1.07	11.5
All Others						5.8	10.4	1.06	11.4
All Hospitals						47.2	100.0	9.36	100.0
Lynn, MA 96,347									
Hospitals Within HSA									
Atlanticare Medical Center Inc	73.3	67.2	48.67	66.8	321	215.8	60.9	32.49	53.8
Hospitals Outside HSA									
Salem Hospital Corporation,The	77.1	16.4	54.77	16.0	334	54.9	15.7	8.77	14.5
Massachusetts General Hospital	240.3	1.7	266.65	2.1	984	16.8	5.1	5.70	9.5
All Others						63.2	18.4	13.40	22.2
All Hospitals						350.7	100.0	60.37	100.0
Malden, MA 54,114									
Hospitals Within HSA									
Malden Hospital,The	38.9	51.4	26.80	50.4	192	98.6	36.7	13.50	33.7
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	2.6	266.65	2.2	984	25.2	11.3	5.78	14.4
Melrose-Wakefield Hospital	68.1	10.3	37.75	9.9	239	24.6	12.8	3.73	9.3
All Others						84.2	39.2	17.08	42.6
All Hospitals						232.6	100.0	40.09	100.0
Marlborough, MA 52,180									
Hospitals Within HSA									
Marlborough Hospital	26.1	77.2	19.65	76.8	103	79.5	61.9	15.08	56.2
Hospitals Outside HSA									
University Of Massachusetts Med Ctr	71.7	3.8	92.98	3.7	408	15.7	8.5	3.42	12.8
Metrowest Medical Center, Inc	93.8	2.6	70.68	2.7	289	7.5	7.5	1.87	7.0
All Others						29.4	22.1	6.47	24.1
All Hospitals						132.1	100.0	26.85	100.0
Medford, MA 57,338									
Hospitals Within HSA									
Lawrence Mem Hospital Of Medford	57.0	51.6	30.17	49.9	150	77.3	47.9	15.05	34.6
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	1.9	266.65	1.9	984	18.9	7.5	5.00	11.5
Malden Hospital,The	38.9	11.4	26.80	12.4	192	21.9	7.3	3.32	7.6
All Others						98.9	37.3	20.12	46.3
All Hospitals						217.0	100.0	43.49	100.0
Melrose, MA 78,545									
Hospitals Within HSA									
Melrose-Wakefield Hospital	68.1	60.5	37.75	59.9	239	144.6	52.2	22.61	40.5
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	2.2	266.65	2.4	984	21.7	6.7	6.43	11.5
Atlanticare Medical Center Inc	73.3	10.0	48.67	10.1	321	32.2	9.3	4.91	8.8
All Others						104.4	31.8	21.93	39.2
All Hospitals						302.9	100.0	55.88	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Methuen, MA 65,410									
Hospitals Within HSA									
Holy Family Hospital & Medical Center	67.6	44.2	32.97	45.2	290	128.0	53.8	14.89	42.2
Hospitals Outside HSA									
Lawrence General Hospital	63.5	18.8	36.88	19.1	267	50.1	21.5	7.03	19.9
Catholic Medical Center	71.4	1.5	56.87	3.3	292	4.5	2.0	1.87	5.3
All Others						57.1	22.7	11.48	32.6
All Hospitals						239.7	100.0	35.27	100.0
Milton, MA 25,558									
Hospitals Within HSA									
Milton Medical Center	46.1	29.3	27.32	28.2	138	40.4	47.3	7.70	35.5
Hospitals Outside HSA									
Carney Hospital	79.1	5.6	58.79	5.5	257	14.4	15.5	3.25	15.0
Massachusetts General Hospital	240.3	0.6	266.65	0.8	984	6.3	5.4	2.10	9.7
All Others						39.3	31.8	8.67	39.9
All Hospitals						100.4	100.0	21.71	100.0
Nantucket, MA 6,012									
Hospitals Within HSA									
Nantucket Cottage Hospital	3.5	89.4	2.17	84.3	19	17.0	67.0	1.83	49.3
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	0.1	266.65	0.2	984	1.1	5.8	0.40	10.7
Cape Cod Hospital	90.3	0.4	72.89	0.5	258	1.0	7.5	0.34	9.1
All Others						4.7	19.7	1.15	30.9
All Hospitals						23.8	100.0	3.71	100.0
Natick, MA 210,485									
Hospitals Within HSA									
Metrowest Medical Center, Inc	93.8	80.5	70.68	79.6	289	232.8	58.8	56.27	52.4
Hospitals Outside HSA									
Milford Whitinsville Reg Hospital	30.8	38.9	23.28	39.7	146	56.8	9.3	9.25	8.6
New England Medical Center Hospital	80.0	3.9	99.43	5.6	491	19.0	2.4	5.60	5.2
All Others						169.5	29.5	36.19	33.7
All Hospitals						478.1	100.0	107.30	100.0
Needham, MA 27,576									
Hospitals Within HSA									
Glover Memorial Hospital	23.2	57.4	14.90	56.9	58	33.3	55.8	8.48	43.9
Hospitals Outside HSA									
Newton-Wellesley Hospital	61.9	3.5	55.00	4.2	316	11.1	9.1	2.29	11.9
Mary And Arthur Clapham Hospital	83.6	0.9	97.70	1.5	272	2.5	3.3	1.44	7.5
All Others						32.3	31.9	7.08	36.7
All Hospitals						79.2	100.0	19.30	100.0
New Bedford, MA 163,683									
Hospitals Within HSA									
St Lukes Healthcare Inc	133.2	93.0	83.31	93.3	390	362.7	80.2	77.69	70.0
Hospitals Outside HSA									
New England Deaconess Hospital	89.5	5.5	103.80	8.1	345	19.1	3.2	8.38	7.5
New England Medical Center Hospital	80.0	3.7	99.43	5.0	491	18.0	1.9	4.94	4.4
All Others						82.9	14.7	20.03	18.1
All Hospitals						482.7	100.0	111.06	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Newburyport, MA 63,370									
Hospitals Within HSA									
Anna Jaques Hospital	29.2	82.2	19.93	82.8	134	110.1	60.8	16.49	52.8
Hospitals Outside HSA									
New England Deaconess Hospital	89.5	1.8	103.80	2.0	345	6.4	4.2	2.11	6.8
Mary And Arthur Clapham Hospital	83.6	1.5	97.70	2.2	272	4.1	3.2	2.10	6.7
All Others						54.1	31.8	10.58	33.8
All Hospitals						174.7	100.0	31.26	100.0
Newton, MA 83,348									
Hospitals Within HSA									
Newton-Wellesley Hospital	61.9	50.6	55.00	48.4	316	160.0	51.5	26.62	49.4
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	1.4	266.65	1.6	984	13.8	5.5	4.25	7.9
Beth Israel Hospital	113.0	2.7	131.56	2.8	462	12.2	4.9	3.63	6.8
All Others						97.9	38.1	19.34	35.9
All Hospitals						283.9	100.0	53.84	100.0
Norfolk, MA 40,393									
Hospitals Within HSA									
Southwood Community Hospital	30.3	18.4	19.76	20.8	182	33.5	27.0	4.12	25.7
Milford Whitinsville Reg Hospital	30.8	13.4	23.28	13.0	146	19.6	20.0	3.03	18.9
Hospitals Outside HSA									
Norwood Hospital	58.1	4.6	40.62	4.3	236	10.8	12.9	1.74	10.8
Metrowest Medical Center, Inc	93.8	1.9	70.68	1.9	289	5.4	8.6	1.32	8.2
All Others						26.9	31.6	5.82	36.4
All Hospitals						96.2	100.0	16.03	100.0
North Adams, MA 39,439									
Hospitals Within HSA									
North Adams Regional Hospital	29.9	88.4	18.91	88.4	110	97.2	65.6	16.72	60.6
Hospitals Outside HSA									
Berkshire Medical Center	86.3	7.0	57.79	7.4	329	23.2	15.1	4.25	15.4
Baystate Medical Center	127.7	0.6	145.11	1.0	661	3.8	1.8	1.48	5.4
All Others						32.1	17.6	5.16	18.7
All Hospitals						156.3	100.0	27.61	100.0
Northampton, MA 101,922									
Hospitals Within HSA									
Cooley Dickinson Hospital Inc,The	35.4	86.7	20.12	86.1	175	151.7	69.6	17.32	58.4
Hospitals Outside HSA									
Baystate Medical Center	127.7	2.6	145.11	3.5	661	17.0	7.4	5.09	17.2
Mercy Hospital	103.1	1.5	59.77	1.7	276	4.0	3.4	1.01	3.4
All Others						38.6	19.5	6.23	21.0
All Hospitals						211.3	100.0	29.65	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Norwood, MA 110,164									
Hospitals Within HSA									
Norwood Hospital	58.1	68.4	40.62	68.7	236	161.5	45.1	27.92	39.4
Hospitals Outside HSA									
Southwood Community Hospital	30.3	30.3	19.76	28.8	182	55.1	10.4	5.68	8.0
Brigham And Womans Hospital	101.7	3.0	147.34	3.2	751	22.4	3.4	4.66	6.6
All Others						146.7	41.1	32.67	46.1
All Hospitals						385.7	100.0	70.93	100.0
Oak Bluffs, MA 11,541									
Hospitals Within HSA									
Martha'S Vineyard Hospital	7.2	82.0	5.93	80.4	29	23.8	56.0	4.77	48.2
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	0.6	266.65	0.7	984	5.9	13.7	1.89	19.1
Falmouth Hospital	34.8	1.7	25.01	1.9	117	2.0	5.6	0.48	4.8
All Others						11.3	24.6	2.77	28.0
All Hospitals						43.0	100.0	9.90	100.0
Palmer, MA 20,397									
Hospitals Within HSA									
Wing Memorial Hospital	13.7	62.8	8.09	63.0	54	33.9	54.6	5.10	42.3
Hospitals Outside HSA									
Baystate Medical Center	127.7	1.8	145.11	2.1	661	12.0	14.7	3.01	25.0
University Of Massachusetts Med Ctr	71.7	0.9	92.98	1.0	408	3.5	3.9	0.91	7.5
All Others						16.3	26.9	3.04	25.2
All Hospitals						65.7	100.0	12.06	100.0
Pittsfield, MA 100,989									
Hospitals Within HSA									
Berkshire Medical Center	86.3	80.5	57.79	79.3	329	264.9	67.3	45.86	62.8
Hillcrest Hospital	20.3	83.9	13.50	82.1	116	97.3	16.5	11.09	15.2
Hospitals Outside HSA									
University Of Massachusetts Med Ctr	71.7	2.4	92.98	4.0	408	9.7	1.7	3.71	5.1
Brigham And Womans Hospital	101.7	0.5	147.34	0.8	751	4.0	0.5	1.13	1.5
All Others						55.0	14.0	11.28	15.4
All Hospitals						430.9	100.0	73.06	100.0
Plymouth, MA 81,544									
Hospitals Within HSA									
Jordan Hospital Inc	45.1	72.6	28.89	72.0	149	108.2	63.7	20.81	52.0
Hospitals Outside HSA									
University Hospital	67.2	4.3	73.54	5.1	325	13.9	5.6	3.78	9.5
Massachusetts General Hospital	240.3	1.0	266.65	1.0	984	9.5	4.5	2.75	6.9
All Others						58.9	26.2	12.69	31.7
All Hospitals						190.5	100.0	40.02	100.0

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Quincy, MA	**67,250**									
Hospitals Within HSA										
Quincy Hospital		82.4	54.5	51.65	53.3	266	144.9	57.0	27.52	47.4
Hospitals Outside HSA										
Carney Hospital		79.1	11.3	58.79	11.5	257	29.1	11.4	6.75	11.6
Massachusetts General Hospital		240.3	1.7	266.65	1.5	984	16.6	5.1	4.04	7.0
All Others							91.5	26.6	19.73	34.0
All Hospitals							282.1	100.0	58.02	100.0
Salem, MA	**118,948**									
Hospitals Within HSA										
Salem Hospital Corporation,The		77.1	64.8	54.77	64.9	334	216.4	51.3	35.56	48.6
J B Thomas Hospital		15.2	78.2	7.05	75.9	59	46.1	12.2	5.35	7.3
Hospitals Outside HSA										
Massachusetts General Hospital		240.3	2.1	266.65	2.7	984	20.2	5.1	7.29	10.0
Atlanticare Medical Center Inc		73.3	12.9	48.67	13.9	321	41.2	9.7	6.78	9.3
All Others							86.6	21.9	18.15	24.8
All Hospitals							410.5	100.0	73.13	100.0
Somerville, MA	**76,393**									
Hospitals Within HSA										
Somerville Hospital		20.9	75.5	14.93	77.1	103	77.7	29.1	11.50	26.4
Others Within HSA		3.8	3.5	1.30	5.0	47	1.7	0.2	0.06	0.2
Hospitals Outside HSA										
Massachusetts General Hospital		240.3	2.8	266.65	2.5	984	27.1	12.2	6.60	15.1
Mt Auburn Hosp		74.7	8.5	62.12	8.8	286	24.2	11.7	5.49	12.6
All Others							114.6	46.6	19.99	45.8
All Hospitals							245.3	100.0	43.66	100.0
South Weymouth, MA	**215,427**									
Hospitals Within HSA										
South Shore Hospital		89.3	81.3	61.20	80.7	280	227.7	47.2	49.41	40.5
Hospitals Outside HSA										
Quincy Hospital		82.4	22.9	51.65	23.9	266	60.8	12.2	12.32	10.1
Brigham And Womans Hospital		101.7	5.0	147.34	6.1	751	37.5	3.3	8.97	7.4
All Others							234.4	37.3	51.33	42.1
All Hospitals							560.4	100.0	122.02	100.0
Southbridge, MA	**41,352**									
Hospitals Within HSA										
Harrington Memorial Hospital		26.7	76.5	13.31	74.7	115	88.0	67.6	9.95	52.1
Hospitals Outside HSA										
University Of Massachusetts Med Ctr		71.7	4.3	92.98	4.5	408	17.5	10.2	4.22	22.1
Med Ctr Central Massacusetts,The		112.0	1.5	91.00	1.5	398	6.0	5.6	1.34	7.0
All Others							19.4	16.6	3.59	18.8
All Hospitals							130.9	100.0	19.10	100.0

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Springfield, MA 312,914									
Hospitals Within HSA									
Baystate Medical Center	127.7	72.6	145.11	67.2	661	479.7	39.0	97.57	54.4
Mercy Hospital	103.1	83.4	59.77	81.7	276	230.3	36.2	48.80	27.2
Hospitals Outside HSA									
Holyoke Hospital Inc	60.8	30.3	28.44	30.2	225	68.2	7.8	8.60	4.8
Providence Hospital Inc,The	30.9	47.8	15.58	48.6	211	100.7	6.2	7.57	4.2
All Others						96.0	10.8	16.75	9.3
All Hospitals						974.9	100.0	179.29	100.0
Stoneham, MA 22,147									
Hospitals Within HSA									
New England Memorial Hospital	31.6	18.6	21.93	19.0	124	23.1	29.8	4.17	28.0
Hospitals Outside HSA									
Winchester Hospital	49.0	7.7	32.06	7.2	186	14.3	19.1	2.32	15.6
Mary And Arthur Clapham Hospital	83.6	1.6	97.70	1.5	272	4.4	6.9	1.44	9.7
All Others						34.1	44.2	6.96	46.8
All Hospitals						75.9	100.0	14.89	100.0
Stoughton, MA 26,777									
Hospitals Within HSA									
Goddard Memorial Hospital	49.8	22.0	25.95	23.6	276	60.8	43.8	6.12	35.5
Hospitals Outside HSA									
Cardinal Cushing General Hospital	63.5	9.3	39.86	8.8	225	20.9	23.5	3.51	20.4
New England Deaconess Hospital	89.5	1.3	103.80	1.6	345	4.5	4.7	1.66	9.6
All Others						31.4	28.0	5.96	34.6
All Hospitals						117.6	100.0	17.25	100.0
Taunton, MA 95,195									
Hospitals Within HSA									
Morton Hospital & Medical Center	66.8	91.5	32.61	90.4	202	184.9	70.2	29.47	57.6
Hospitals Outside HSA									
Cardinal Cushing General Hospital	63.5	9.2	39.86	9.6	225	20.6	6.7	3.81	7.4
New England Medical Center Hospital	80.0	1.9	99.43	2.8	491	9.4	1.8	2.77	5.4
All Others						76.8	21.4	15.13	29.6
All Hospitals						291.7	100.0	51.18	100.0
Waltham, MA 68,092									
Hospitals Within HSA									
Waltham Hospital	46.9	71.5	28.03	71.6	213	152.4	60.0	20.06	47.3
Hospitals Outside HSA									
Newton-Wellesley Hospital	61.9	6.4	55.00	6.5	316	20.2	7.1	3.58	8.4
St Elizabeths Hospital	112.8	3.1	104.34	3.0	415	12.7	6.2	3.16	7.5
All Others						65.7	26.7	15.64	36.9
All Hospitals						251.0	100.0	42.44	100.0

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Ware, MA 31,070									
Hospitals Within HSA									
Mary Lane Hospital	11.0	74.8	5.73	76.5	43	32.2	42.3	4.38	31.4
Hospitals Outside HSA									
Baystate Medical Center	127.7	2.2	145.11	2.5	661	14.3	14.3	3.66	26.2
Wing Memorial Hospital	13.7	13.5	8.09	13.6	54	7.3	9.5	1.10	7.9
All Others						26.6	33.9	4.81	34.5
All Hospitals						80.4	100.0	13.95	100.0
Wareham, MA 25,767									
Hospitals Within HSA									
Tobey Hospital Inc	17.9	57.9	13.75	56.6	60	34.7	53.5	7.78	47.5
Hospitals Outside HSA									
St Lukes Healthcare Inc	133.2	1.3	83.31	1.3	390	5.0	8.9	1.12	6.8
New England Deaconess Hospital	89.5	0.8	103.80	0.9	345	2.7	3.6	0.95	5.8
All Others						29.1	34.1	6.54	39.9
All Hospitals						71.5	100.0	16.38	100.0
Webster, MA 25,736									
Hospitals Within HSA									
Hubbard Regional Hospital	14.2	74.5	9.39	75.4	41	30.5	53.0	7.07	52.3
Hospitals Outside HSA									
University Of Massachusetts Med Ctr	71.7	2.2	92.98	2.1	408	9.0	7.9	1.95	14.5
Med Ctr Central Massacusetts,The	112.0	1.5	91.00	1.8	398	6.1	8.6	1.67	12.4
All Others						23.7	30.5	2.83	20.9
All Hospitals						69.3	100.0	13.53	100.0
Westfield, MA 53,368									
Hospitals Within HSA									
Noble Hospital	32.9	78.8	16.94	79.0	111	87.5	67.4	13.37	53.6
Hospitals Outside HSA									
Baystate Medical Center	127.7	3.9	145.11	4.6	661	25.7	12.9	6.70	26.8
Mercy Hospital	103.1	2.1	59.77	2.2	276	5.7	5.5	1.34	5.4
All Others						27.9	14.2	3.56	14.3
All Hospitals						146.8	100.0	24.98	100.0
Winchester, MA 108,572									
Hospitals Within HSA									
Winchester Hospital	49.0	65.8	32.06	66.2	186	122.3	44.2	21.23	37.3
Hospitals Outside HSA									
Mary And Arthur Clapham Hospital	83.6	9.0	97.70	8.3	272	24.4	10.3	8.12	14.3
Massachusetts General Hospital	240.3	2.0	266.65	1.9	984	20.1	6.7	5.10	9.0
All Others						111.9	38.9	22.46	39.5
All Hospitals						278.7	100.0	56.91	100.0
Winthrop, MA 18,907									
Hospitals Within HSA									
Winthrop Community Hospital	20.4	41.9	13.07	45.0	107	44.8	42.3	5.88	34.9
Hospitals Outside HSA									
Massachusetts General Hospital	240.3	1.4	266.65	1.3	984	13.7	16.5	3.55	21.1
Beth Israel Hospital	113.0	1.7	131.56	1.8	462	7.9	9.6	2.39	14.2
All Others						26.5	31.6	5.02	29.8
All Hospitals						92.9	100.0	16.84	100.0

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Worcester, MA 405,867									
Hospitals Within HSA									
Med Ctr Central Massacusetts,The	112.0	87.6	91.00	85.7	398	348.5	36.3	77.94	40.7
St Vincent Hospital	115.1	82.9	52.70	78.6	431	357.2	35.3	41.39	21.6
University Of Massachusetts Med Ctr	71.7	49.1	92.98	44.3	408	200.2	13.0	41.19	21.5
Hospitals Outside HSA									
Milford Whitinsville Reg Hospital	30.8	32.2	23.28	31.3	146	47.1	3.7	7.30	3.8
Massachusetts General Hospital	240.3	0.8	266.65	1.1	984	8.2	0.7	2.81	1.5
All Others						115.9	11.0	20.66	10.8
All Hospitals						1,077.1	100.0	191.30	100.0
Berlin, NH 17,855									
Hospitals Within HSA									
Androscoggin Valley Hospital	14.9	94.2	7.42	94.8	82	77.2	73.6	7.03	60.4
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	3.4	76.93	3.8	407	14.0	14.9	2.93	25.2
Maine Medical Center	147.9	0.2	111.83	0.3	598	1.1	1.5	0.31	2.6
All Others						9.8	10.0	1.37	11.8
All Hospitals						102.1	100.0	11.63	100.0
Claremont, NH 22,069									
Hospitals Within HSA									
Valley Regional Hospital	9.8	71.7	7.34	71.6	71	50.9	54.2	5.26	50.0
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	3.9	76.93	4.5	407	15.7	24.6	3.47	33.0
Springfield Hospital Inc	14.0	5.8	8.07	6.4	69	4.0	6.3	0.52	4.9
All Others						9.4	14.9	1.27	12.1
All Hospitals						80.0	100.0	10.52	100.0
Colebrook, NH 6,633									
Hospitals Within HSA									
Upper Connecticut Valley Hospital	3.0	79.4	1.80	78.0	31	24.6	60.1	1.41	54.9
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	0.9	76.93	0.7	407	3.8	19.6	0.57	22.2
Weeks Memorial Hospital-Swing	7.2	2.5	4.03	3.2	39	1.0	4.5	0.13	5.0
All Others						3.5	15.8	0.46	17.9
All Hospitals						32.9	100.0	2.56	100.0
Concord, NH 105,055									
Hospitals Within HSA									
Concord Hospital	57.7	82.6	34.03	80.5	210	173.5	76.0	27.38	70.4
Hospitals Outside HSA									
Catholic Medical Center	71.4	6.3	56.87	7.2	292	18.4	7.2	4.09	10.5
Mary Hitchcock Memorial Hospital	82.6	1.7	76.93	1.8	407	7.0	2.3	1.40	3.6
All Others						41.3	14.5	6.03	15.5
All Hospitals						240.2	100.0	38.90	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Derry, NH 47,907									
Hospitals Within HSA									
Parkland Medical Center	17.0	41.6	8.85	40.5	86	35.7	45.7	3.58	35.6
Hospitals Outside HSA									
Catholic Medical Center	71.4	3.1	56.87	3.4	292	9.0	14.2	1.92	19.1
Elliot Hospital	51.1	3.0	28.43	3.7	205	6.0	9.8	1.05	10.5
All Others						20.0	30.4	3.49	34.8
All Hospitals						70.7	100.0	10.06	100.0
Dover, NH 74,625									
Hospitals Within HSA									
Wentworth-Douglass Hospital	26.6	74.8	16.46	71.6	112	83.7	61.1	11.78	55.2
Hospitals Outside HSA									
Maine Medical Center	147.9	1.0	111.83	1.5	598	6.0	4.6	1.63	7.7
Frisbie Memorial Hospital	23.4	14.4	12.47	13.1	101	14.5	10.3	1.63	7.6
All Others						33.3	24.1	6.30	29.6
All Hospitals						137.5	100.0	21.34	100.0
Exeter, NH 79,010									
Hospitals Within HSA									
Exeter Hospital Inc	24.8	81.3	17.58	79.2	100	81.3	56.9	13.93	50.8
Hospitals Outside HSA									
Catholic Medical Center	71.4	2.3	56.87	4.2	292	6.7	4.6	2.40	8.8
Portsmouth Regional Hospital	28.4	11.3	19.38	12.1	114	12.8	9.0	2.34	8.5
All Others						44.4	29.4	8.74	31.9
All Hospitals						145.2	100.0	27.41	100.0
Franklin, NH 23,078									
Hospitals Within HSA									
Franklin Regional Hospital	10.2	77.6	6.10	77.7	49	38.0	53.2	4.74	46.2
Hospitals Outside HSA									
Lakes Region General Hospital	27.2	9.2	19.95	9.2	115	10.5	16.8	1.83	17.9
Concord Hospital	57.7	1.9	34.03	2.7	210	3.9	7.2	0.92	9.0
All Others						17.3	22.8	2.75	26.9
All Hospitals						69.7	100.0	10.25	100.0
Keene, NH 55,756									
Hospitals Within HSA									
Cheshire Medical Center,The	42.5	70.1	20.44	69.1	177	124.0	77.3	14.13	63.3
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	5.8	76.93	6.4	407	23.7	12.5	4.94	22.1
Monadnock Community Hospital	8.3	6.5	5.12	6.8	62	4.0	1.4	0.35	1.6
All Others						15.6	8.9	2.89	13.0
All Hospitals						167.3	100.0	22.31	100.0
Laconia, NH 43,292									
Hospitals Within HSA									
Lakes Region General Hospital	27.2	74.7	19.95	73.4	115	85.9	69.6	14.64	66.2
Hospitals Outside HSA									
Catholic Medical Center	71.4	1.6	56.87	2.6	292	4.8	4.0	1.47	6.7
Mary Hitchcock Memorial Hospital	82.6	1.6	76.93	1.3	407	6.7	4.6	1.00	4.5
All Others						28.8	21.8	4.99	22.6
All Hospitals						126.2	100.0	22.10	100.0

	1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Lancaster, NH 13,428									
Hospitals Within HSA									
Weeks Memorial Hospital-Swing	7.2	90.9	4.03	89.2	39	35.4	63.2	3.59	51.3
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	1.9	76.93	2.4	407	7.8	15.5	1.85	26.4
Littleton Hospital	6.3	13.7	4.60	13.3	52	7.1	8.4	0.61	8.7
All Others						9.6	12.9	0.95	13.6
All Hospitals						59.9	100.0	7.01	100.0
Lebanon, NH 61,167									
Hospitals Within HSA									
Mary Hitchcock Memorial Hospital	82.6	28.9	76.93	25.6	407	117.6	77.8	19.70	79.7
Alice Peck Day Memorial Hospital	1.9	92.0	1.45	91.3	32	29.4	5.8	1.32	5.4
Hospitals Outside HSA									
Mt Ascutney Hospital Health Center	6.7	23.8	4.05	25.0	33	7.9	5.2	1.01	4.1
Central Vermont Hospital	26.3	1.7	15.32	1.9	122	2.1	1.5	0.29	1.2
All Others						15.7	9.8	2.39	9.7
All Hospitals						172.7	100.0	24.71	100.0
Littleton, NH 14,253									
Hospitals Within HSA									
Littleton Hospital	6.3	67.1	4.60	66.5	52	34.9	62.4	3.06	57.4
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	1.6	76.93	1.6	407	6.3	18.8	1.21	22.7
Speare Memorial Hospital	4.8	3.5	3.65	3.3	47	1.6	2.5	0.12	2.3
All Others						6.0	16.3	0.94	17.6
All Hospitals						48.8	100.0	5.33	100.0
Manchester, NH 174,345									
Hospitals Within HSA									
Catholic Medical Center	71.4	67.9	56.87	52.6	292	198.3	48.1	29.89	47.7
Elliot Hospital	51.1	75.9	28.43	77.0	205	155.5	38.5	21.89	34.9
Hospitals Outside HSA									
Parkland Medical Center	17.0	12.6	8.85	12.5	86	10.9	2.1	1.11	1.8
Concord Hospital	57.7	2.9	34.03	3.0	210	6.0	1.6	1.01	1.6
All Others						43.5	9.6	8.82	14.1
All Hospitals						414.2	100.0	62.72	100.0
Nashua, NH 163,513									
Hospitals Within HSA									
St Joseph Hospital	52.3	79.3	24.87	79.1	208	164.9	51.8	19.68	40.3
Nashua Memorial Hospital	26.2	85.9	16.10	86.3	171	146.9	28.1	13.89	28.4
Hospitals Outside HSA									
Catholic Medical Center	71.4	3.3	56.87	5.5	292	9.7	3.0	3.13	6.4
Massachusetts General Hospital	240.3	0.5	266.65	0.7	984	5.3	1.6	1.73	3.6
All Others						56.3	15.5	10.41	21.3
All Hospitals						383.1	100.0	48.85	100.0

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New London, NH 22,944									
Hospitals Within HSA									
New London Hospital Association Inc	5.9	83.2	4.13	81.4	35	29.1	36.6	3.36	32.5
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	4.3	76.93	4.5	407	17.3	26.1	3.49	33.7
Valley Regional Hospital	9.8	12.3	7.34	12.1	71	8.7	8.9	0.89	8.6
All Others						16.0	28.4	2.60	25.2
All Hospitals						71.1	100.0	10.35	100.0
North Conway, NH 14,058									
Hospitals Within HSA									
Memorial Hospital,The	4.5	68.6	3.26	69.9	35	24.0	40.0	2.28	38.5
Hospitals Outside HSA									
Maine Medical Center	147.9	1.2	111.83	1.2	598	6.8	21.9	1.34	22.7
Mary Hitchcock Memorial Hospital	82.6	0.4	76.93	0.3	407	1.5	4.0	0.23	3.8
All Others						11.3	34.1	2.07	35.0
All Hospitals						43.6	100.0	5.92	100.0
Peterborough, NH 33,448									
Hospitals Within HSA									
Monadnock Community Hospital	8.3	76.4	5.12	76.1	62	47.4	40.0	3.90	33.9
Hospitals Outside HSA									
Catholic Medical Center	71.4	2.0	56.87	2.8	292	5.9	9.1	1.61	14.0
Cheshire Medical Center,The	42.5	6.2	20.44	6.9	177	11.0	16.7	1.42	12.3
All Others						23.2	34.2	4.55	39.7
All Hospitals						87.5	100.0	11.48	100.0
Plymouth, NH 17,010									
Hospitals Within HSA									
Speare Memorial Hospital	4.8	72.2	3.65	72.6	47	33.9	43.8	2.65	41.3
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	1.6	76.93	1.4	407	6.5	16.8	1.09	16.9
Lakes Region General Hospital	27.2	3.2	19.95	3.5	115	3.6	10.9	0.69	10.7
All Others						10.1	28.4	2.00	31.1
All Hospitals						54.1	100.0	6.43	100.0
Portsmouth, NH 35,135									
Hospitals Within HSA									
Portsmouth Regional Hospital	28.4	59.1	19.38	56.3	114	67.4	77.2	10.91	68.1
Hospitals Outside HSA									
Mary And Arthur Clapham Hospital	83.6	0.7	97.70	0.9	272	1.9	2.7	0.90	5.6
Catholic Medical Center	71.4	0.6	56.87	1.3	292	1.6	1.9	0.71	4.4
All Others						17.1	18.2	3.49	21.9
All Hospitals						88.0	100.0	16.01	100.0
Rochester, NH 42,504									
Hospitals Within HSA									
Frisbie Memorial Hospital	23.4	64.0	12.47	68.5	101	64.6	66.4	8.54	55.2
Hospitals Outside HSA									
Wentworth-Douglass Hospital	26.6	9.5	16.46	12.2	112	10.6	11.2	2.00	12.9
Maine Medical Center	147.9	0.5	111.83	0.8	598	3.2	3.5	0.88	5.7
All Others						18.5	18.9	4.04	26.1
All Hospitals						96.9	100.0	15.46	100.0

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Wolfeboro, NH 18,800									
Hospitals Within HSA									
Huggins Hospital	8.9	73.8	5.80	74.1	47	34.7	43.1	4.30	36.4
Hospitals Outside HSA									
Catholic Medical Center	71.4	1.3	56.87	2.4	292	3.7	6.0	1.39	11.7
Lakes Region General Hospital	27.2	3.9	19.95	4.3	115	4.5	7.0	0.86	7.3
All Others						29.4	44.0	5.26	44.6
All Hospitals						72.3	100.0	11.81	100.0
Woodsville, NH 13,878									
Hospitals Within HSA									
Cottage Hospital	4.3	86.3	3.46	86.7	38	32.8	39.6	3.00	39.0
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	4.1	76.93	3.9	407	16.6	36.3	3.00	39.0
Littleton Hospital	6.3	7.3	4.60	7.7	52	3.8	5.0	0.36	4.6
All Others						11.4	19.2	1.34	17.4
All Hospitals						64.6	100.0	7.69	100.0
Newport, RI 69,543									
Hospitals Within HSA									
Newport Hospital	38.9	82.1	22.52	80.5	200	164.2	71.6	18.13	60.9
Hospitals Outside HSA									
Miriam Hospital	88.8	2.6	72.21	3.9	247	6.5	5.2	2.82	9.5
Rhode Island Hospital	172.9	1.0	157.27	1.2	709	7.0	3.8	1.89	6.4
All Others						31.0	19.3	6.94	23.3
All Hospitals						208.7	100.0	29.77	100.0
Pawtucket, RI 89,835									
Hospitals Within HSA									
Memorial Hospital Of Rhode Island	80.5	63.1	49.38	62.0	294	185.4	64.3	30.63	58.0
Hospitals Outside HSA									
Miriam Hospital	88.8	14.4	72.21	14.2	247	35.6	16.2	10.28	19.5
Rhode Island Hospital	172.9	3.5	157.27	3.4	709	24.9	7.7	5.30	10.1
All Others						32.9	11.8	6.55	12.4
All Hospitals						278.8	100.0	52.76	100.0
Providence, RI 469,499									
Hospitals Within HSA									
Rhode Island Hospital	172.9	70.5	157.27	66.1	709	500.2	31.8	104.00	37.6
St Josephs Hospital	108.9	80.9	63.02	80.8	340	275.2	23.0	50.91	18.4
Miriam Hospital	88.8	60.3	72.21	53.9	247	148.9	14.0	38.89	14.1
Roger Williams General Hospital	59.6	83.3	45.39	81.8	165	137.4	12.9	37.11	13.4
Community Hospital Of Rhode Island	11.1	60.3	6.09	61.1	63	38.0	1.7	3.72	1.4
Hospitals Outside HSA									
Memorial Hospital Of Rhode Island	80.5	22.6	49.38	23.1	294	66.3	4.7	11.39	4.1
Kent Country Memorial Hospital	122.4	11.0	60.30	10.8	359	39.5	3.5	6.52	2.4
All Others						125.9	8.3	23.76	8.6
All Hospitals						1,331.4	100.0	276.30	100.0

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Wakefield, RI 56,533									
Hospitals Within HSA									
South County Hospital Inc	25.6	68.0	16.47	68.5	100	68.0	55.9	11.27	49.3
Hospitals Outside HSA									
Rhode Island Hospital	172.9	2.0	157.27	2.4	709	13.9	10.9	3.76	16.4
Westerly Hospital	31.8	6.8	19.63	7.5	125	8.5	7.0	1.47	6.4
All Others						30.6	26.3	6.38	27.9
All Hospitals						121.0	100.0	22.88	100.0
Warwick, RI 187,117									
Hospitals Within HSA									
Kent Country Memorial Hospital	122.4	84.0	60.30	83.9	359	301.6	62.1	50.61	50.3
Hospitals Outside HSA									
Rhode Island Hospital	172.9	12.4	157.27	13.4	709	87.6	12.9	21.11	21.0
Miriam Hospital	88.8	8.4	72.21	8.1	247	20.7	4.5	5.84	5.8
All Others						130.3	20.5	23.04	22.9
All Hospitals						540.2	100.0	100.61	100.0
Westerly, RI 49,390									
Hospitals Within HSA									
Westerly Hospital	31.8	79.7	19.63	77.3	125	99.7	69.3	15.16	60.7
Hospitals Outside HSA									
Lawrence & Memorial Hospital	72.3	4.2	43.75	3.8	298	12.4	8.2	1.64	6.6
Rhode Island Hospital	172.9	0.7	157.27	1.0	709	4.9	3.3	1.54	6.2
All Others						26.4	19.2	6.62	26.5
All Hospitals						143.4	100.0	24.96	100.0
Woonsocket, RI 127,734									
Hospitals Within HSA									
Landmark Medical Center Inc	95.4	71.9	53.14	71.6	295	212.1	67.3	38.06	56.5
Hospitals Outside HSA									
Rhode Island Hospital	172.9	3.7	157.27	4.6	709	26.1	6.3	7.27	10.8
Miriam Hospital	88.8	6.1	72.21	8.4	247	15.0	5.3	6.04	9.0
All Others						83.5	21.1	16.01	23.8
All Hospitals						336.7	100.0	67.38	100.0
Bennington, VT 48,768									
Hospitals Within HSA									
Southwestern Vermont Medical Center	31.0	85.2	15.75	83.8	140	119.3	69.7	13.20	59.1
Hospitals Outside HSA									
St Peters Hospital	160.4	0.8	79.47	1.8	447	3.4	3.2	1.41	6.3
Albany Medical Center	113.2	0.8	96.73	1.3	593	4.7	2.4	1.29	5.8
All Others						41.2	24.7	6.46	28.9
All Hospitals						168.6	100.0	22.35	100.0
Berlin, VT 61,594									
Hospitals Within HSA									
Central Vermont Hospital	26.3	87.6	15.32	86.0	122	106.9	70.5	13.17	61.0
Hospitals Outside HSA									
Medical Center Hospital Of Vermont	95.2	4.5	79.10	4.6	499	22.4	13.1	3.64	16.9
Mary Hitchcock Memorial Hospital	82.6	3.0	76.93	3.4	407	12.2	7.6	2.60	12.0
All Others						15.3	8.8	2.18	10.1
All Hospitals						156.8	100.0	21.59	100.0

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Brattleboro, VT 29,089									
Hospitals Within HSA									
Brattleboro Memorial Hospital	15.1	82.0	6.84	78.0	84	68.9	66.8	5.33	49.5
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	2.7	76.93	3.6	407	11.1	12.2	2.79	25.9
Cheshire Medical Center,The	42.5	4.9	20.44	5.3	177	8.6	11.2	1.08	10.0
All Others						10.7	9.9	1.57	14.6
All Hospitals						99.3	100.0	10.78	100.0
Burlington, VT 142,306									
Hospitals Within HSA									
Medical Center Hospital Of Vermont	95.2	45.8	79.10	39.2	499	228.3	69.3	30.98	75.1
Fanny Allen Hospital	17.6	83.4	8.80	80.9	83	69.2	23.3	7.12	17.3
Hospitals Outside HSA									
All Others						22.1	7.4	3.15	7.6
All Hospitals						319.6	100.0	41.25	100.0
Middlebury, VT 27,976									
Hospitals Within HSA									
Porter Medical Center Inc	8.2	76.3	4.50	77.1	45	34.4	48.3	3.47	39.5
Hospitals Outside HSA									
Medical Center Hospital Of Vermont	95.2	5.1	79.10	5.3	499	25.6	37.8	4.17	47.5
Rutland Regional Medical Center	56.3	1.0	28.52	1.0	188	1.9	4.4	0.28	3.2
All Others						5.8	9.7	0.87	9.9
All Hospitals						67.7	100.0	8.79	100.0
Morrisville, VT 22,493									
Hospitals Within HSA									
Copley Hospital	7.9	84.1	5.08	83.0	44	37.0	55.9	4.22	49.2
Hospitals Outside HSA									
Medical Center Hospital Of Vermont	95.2	3.2	79.10	3.4	499	15.8	25.3	2.70	31.5
Central Vermont Hospital	26.3	2.8	15.32	3.3	122	3.4	6.1	0.50	5.9
All Others						7.7	12.7	1.16	13.4
All Hospitals						63.9	100.0	8.57	100.0
Newport, VT 23,298									
Hospitals Within HSA									
North Country Hospital & Hlth Center	9.1	91.2	6.78	91.2	42	38.3	67.5	6.19	62.0
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	2.3	76.93	3.0	407	9.4	15.7	2.33	23.3
Medical Center Hospital Of Vermont	95.2	1.0	79.10	0.7	499	4.8	7.4	0.53	5.3
All Others						7.2	9.4	0.94	9.4
All Hospitals						59.7	100.0	9.99	100.0
Randolph, VT 17,561									
Hospitals Within HSA									
Gifford Memorial Hospital Inc	5.4	82.8	3.53	83.4	41	33.9	50.8	2.94	42.9
Hospitals Outside HSA									
Mary Hitchcock Memorial Hospital	82.6	3.1	76.93	3.5	407	12.6	29.0	2.72	39.5
Central Vermont Hospital	26.3	2.1	15.32	2.3	122	2.6	6.3	0.35	5.1
All Others						5.4	13.9	0.86	12.6
All Hospitals						54.5	100.0	6.87	100.0

		1992-3 MPDs (1,000s) (3)	% of HOSP's MPDs from HSA (4)	1992-3 MRs ($ in millions) (5)	% of HOSP's MRs from HSA (6)	Staffed Beds (7)	Allocation of HSA Beds by HOSP (8)	% of HSA's MPDs by HOSP (9)	HSA MRs by HOSP ($ in Millions) (10)	% of HSA's MRs by HOSP (11)
Rutland, VT	**64,801**									
Hospitals Within HSA										
Rutland Regional Medical Center		56.3	82.7	28.52	82.4	188	155.5	83.5	23.51	74.0
Hospitals Outside HSA										
Medical Center Hospital Of Vermont		95.2	3.8	79.10	5.2	499	19.1	6.5	4.07	12.8
Mary Hitchcock Memorial Hospital		82.6	1.2	76.93	1.5	407	4.9	1.8	1.13	3.6
All Others							21.8	8.2	3.07	9.6
All Hospitals							201.3	100.0	31.77	100.0
Springfield, VT	**29,187**									
Hospitals Within HSA										
Springfield Hospital Inc		14.0	83.5	8.07	83.7	69	57.6	51.6	6.75	44.1
Hospitals Outside HSA										
Mary Hitchcock Memorial Hospital		82.6	6.5	76.93	6.7	407	26.5	23.7	5.19	33.9
Mt Ascutney Hospital Health Center		6.7	15.6	4.05	14.3	33	5.1	4.6	0.58	3.8
All Others							22.3	20.0	2.79	18.3
All Hospitals							111.5	100.0	15.32	100.0
St Albans, VT	**38,242**									
Hospitals Within HSA										
Northwestern Medical Center Inc		14.5	92.7	7.56	93.5	70	64.9	56.7	7.07	46.7
Hospitals Outside HSA										
Medical Center Hospital Of Vermont		95.2	8.8	79.10	8.6	499	44.0	35.4	6.79	44.8
Fanny Allen Hospital		17.6	5.4	8.80	6.6	83	4.5	4.0	0.58	3.8
All Others							4.5	3.9	0.71	4.7
All Hospitals							117.9	100.0	15.15	100.0
St Johnsbury, VT	**24,303**									
Hospitals Within HSA										
Northeastern Vermont Reg Hospital		7.8	84.8	5.83	84.0	100	84.8	63.2	4.90	58.8
Hospitals Outside HSA										
Mary Hitchcock Memorial Hospital		82.6	2.5	76.93	2.6	407	10.1	19.7	2.02	24.3
Medical Center Hospital Of Vermont		95.2	0.4	79.10	0.4	499	1.8	3.3	0.30	3.7
All Others							7.9	13.9	1.10	13.3
All Hospitals							104.6	100.0	8.33	100.0
Townshend, VT	**4,115**									
Hospitals Within HSA										
Grace Cottage Hospital		0.9	61.2	0.82	63.1	17	10.4	29.5	0.52	31.4
Hospitals Outside HSA										
Brattleboro Memorial Hospital		15.1	4.0	6.84	6.3	84	3.4	33.6	0.43	26.1
Mary Hitchcock Memorial Hospital		82.6	0.3	76.93	0.5	407	1.3	14.7	0.42	25.1
All Others							1.9	22.3	0.29	17.4
All Hospitals							17.0	100.0	1.65	100.0
Windsor, VT	**8,165**									
Hospitals Within HSA										
Mt Ascutney Hospital Health Center		6.7	34.3	4.05	36.9	33	11.3	51.7	1.49	44.2
Hospitals Outside HSA										
Mary Hitchcock Memorial Hospital		82.6	1.3	76.93	1.4	407	5.1	23.2	1.04	30.8
Valley Regional Hospital		9.8	3.5	7.34	4.1	71	2.5	7.7	0.30	9.0
All Others							3.5	17.4	0.54	16.0
All Hospitals							22.4	100.0	3.38	100.0

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