STUDY OF MAINE'S CON PROGRAM

FINAL REPORT

By

Alpha Center
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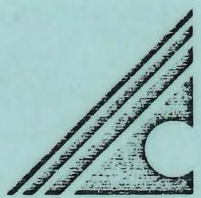
April 1987



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ACKNOWLEDGEMENTS

This study of Maine's certificate of need program was undertaken by the Alpha Center and its subcontractor, Lewin and Associates, Inc. under contract with Maine's Bureau of Medical Services, Department of Human Resources. The study benefited throughout from the advice and guidance of the Bureau Director, Trish Riley, and her Co-Chair of the CON Workgroup, Sheila Hanley, Vice President for Corporate Development, Mercy Hospital. Sarah Krevans, Deputy Director of the Bureau, provided very useful comments and was especially helpful throughout the study, as well as providing assistance through her planning, project review, and data staffs.

We would like to thank the members of the CON Workgroup, who are listed in Appendix G, for assistance in commenting on our early findings at their February meeting. We also thank the representatives of the health care industry and state government who consented to be interviewed (see Appendix A) and who provided many insights into Maine's health care system and its health planning and certificate of need programs.

Under the subcontract, Jack Needleman contributed greatly to the study in its initial conceptualization, in interpretation of findings and in development of recommendations.

The study report with its conclusions and recommendations are, of course, solely the responsibility of the Alpha Center.

W. David Helms, Ph.D.

Samuel V. Stiles

EXECUTIVE SUMMARY

This study of Maine's certificate of need (CON) program was undertaken by the Alpha Center and its subcontractor, Lewin and Associates, Inc. under contract with Maine's Bureau of Medical Services, Department of Human Services.

This final report of a study of Maine's certificate of need (CON) and planning program has been prepared by the Alpha Center and its subcontractor, Lewin and Associates, Inc., for the Maine Bureau of Medical Services. Its purpose is to assist the Bureau and its CON Workgroup in their consideration of whether CON should be continued in Maine, and if so, how it should be structured and how the effectiveness of the reviews and supporting planning process could be improved.

Beginning in 1966, states enacted certificate of need laws in a period in which there were open ended cost and charge based reimbursement by major payers and in which there were only limited controls on utilization. In such an environment, there were few penalties for investing in plant, equipment or services that were unneeded, duplicative, or overbuilt. Certificate of need, while not designed to control overall health care costs, was intended to provide outside review and constraint on unneeded investment -- to substitute for the economic discipline then absent from the market. By 1980, all states had enacted CON legislation, except Louisiana, which continued to review proposed capital expenditures by health facilities under a similar program (Section 1122 of the Social Security Act).

In the period since certificate of need has been enacted, there have been substantial changes in the health care market. Prospective payment systems have been introduced for hospital services by at least some large payers; utilization control programs, including concurrent review, second surgical opinion and required treatment on an outpatient basis, have been expanded; prepaid, at-risk capitated programs such as HMOs have been expanded, and new forms such as PPO's have been created. In the past two years some states have repealed their CON legislation. At present, 43 states have CON, an additional three states use section 1122 review only,

and one state has only a moratorium in effect. Thus, 47 states continue to have some form of capital expenditure control. The question in a given state, such as Maine, is whether the discipline that these efforts impose has developed sufficiently to reduce or eliminate the need for certificate of need. For this study, therefore, it was important to review data on the structure, utilization and cost of elements of Maine's health care system, and for perspective, to make comparisons with other states and with the United States as a whole.

In addition to reviewing data and documents relating to health planning and CON in Maine and other states, the study team interviewed representatives of Maine's health care industry and state government to learn their perceptions of recent experience in Maine. Our assessments of the issues and initial findings were reviewed by the Bureau's CON Workgroup, and later analyses and potential recommendations were reviewed with the Co-Chairs of the Workgroup.

The Alpha Center principal findings and recommendations are summarized below.

A. Summary of Findings

1. From 1974 to 1982, Maine's ratio of hospital beds per 1,000 population was notably higher than the national ratio, but now it is about the same -- 4.21 beds per 1,000 compared to the U.S. figure of 4.22 (1985).

2. Nationally the supply of long-term care beds increased greatly from 1969 to 1980 -- from 43.4 to 57.2 beds per 1,000 population over 65 years old, a 32 percent increase. In Maine these beds have increased even faster, from 30.9 per 1,000 to 63.5, an increase of 106%.

3. The trend in hospital admissions per population in Maine has been generally downward since 1974, a trend that has occurred nationally only since 1980.

4. The United States shows a generally declining average length of stay since 1972, with only a slight rise in 1981-1983. Maine, after rather sharp increases in 1977-1981, showed a sharp reduction, consistent with the national trend, until 1983. It is not clear whether the upturn in Maine in 1984 represents a significant change in direction in this trend or is only a minor interruption in an overall downward trend. Data from MHCFC, not included here (because not comparable to national data), show a continued downward movement in 1984 and 1985, followed by an upward movement in 1986.

5. In inpatient hospital days per 1,000 population, Maine had a somewhat greater increase than the United States from 1973 to 1981, reaching 1,258 compared to 1,221 in 1981. Both Maine and the United States have shown a sharp decline in recent years, with Maine at 1,032 days in 1985, only slightly above the national figure of 998 days per thousand population.

6. Maine and the United States had slightly declining average hospital occupancy rates in the mid-seventies followed by an increase for several years, reaching 75.6 percent and 76.1 percent in 1980 and 1981 respectively. This was followed by a sharp decline in recent years that has brought both rates lower than at any time since 1971 -- 67.2 percent for Maine and 64.9 nationally. Lower occupancy rates tend to increase average costs because fixed costs remain the same as they would be under higher occupancy.

7. Available data on utilization of nursing home beds is limited. Reported utilization in Maine rose from 108,167 skilled nursing patient days in 1982 to 115,394 days in 1984, an increase of 6.7 percent. Intermediate care days rose from 2,956,444 patient days to 3,075,691 days in the same period, an increase of 4.0 percent. It is important to observe that Maine has a relatively low proportion of skilled nursing beds to total nursing home beds in comparison to other states.

8. Reported occupancy rates of skilled nursing care units in Maine fell from 78.2 percent to 75.1 percent during this period. Intermediate care homes and units rose from 96.5 percent to 98.0 percent. Comparable national data are not available.

9. Nationally surgical rates per one thousand population began leveling off in 1980 and became roughly level by 1983. In Maine, the effect occurred later, beginning to level off only in 1983, but it now seems to be falling toward the national rate.

10. Nationally there has been an increasing use of hospital admissions for surgery. Maine's rate has also increased as an overall trend, surpassing the national rate in 1982, but since then seems to be tending toward the U.S. rate.

11. Hospital expenses per capita continue to rise in Maine and the United States, and at about the same rate. In 1985, these expenses were $550.55 per capita nationally and $520.25 in Maine, with Maine thus continuing as in recent years to be about 5 to 6 percent below the national level.

12. On an expenses per admission basis, Maine also continues to be below the U.S., $3,693.73 compared to $3,901.44 nationally in 1985. Maine's rate of growth is now slightly below the national rate, dropping from 3.47 percent below the national rate in 1984 to 5.32 percent below it in 1985.

13. Hospital expenses per day of stay have also continued to rise nationally and in Maine, with Maine's usually 5 to 10 percent lower. Maine's rate of increase, which was greater than the national rate prior to 1983, has been less since then. In 1985, Maine's hospital expenses per day were 8.62 percent below the national average.

14. Hospital total net margin, in Maine and nationally, averaged about one percent in 1975 and rose in Maine to 4.20 percent by 1983 nationally to 4.37 percent by 1982. From 1983 through 1985, this measure remained about level in Maine -- 4.26 percent in 1984 and 4.30 percent in 1985. Nationally, total net margin continued to rise, however, 5.36 percent in 1984 and 6.42 in 1985.

    Operating margin, a measure of profitability from patient services, has been lower in Maine than total net margin, but has also shown a general upward trend, rising from 0.6 percent in 1979-80 to 2.1 percent in 1984-85. Unpublished data from the Maine Hospital Association show a falling off in operating margin in 1985-86, the first payment year under rate setting. Comparable national data were not available.

15. Maine ranked high in bed supply in 1980 compared to other states, but is now in the middle. Admissions are also about in the middle. Ranks for average length of stay and expenses continue high. Maine's rank in occupancy rate has risen, as other states' occupancy rates have fallen even more steeply than Maine's. Maine's hospitals' average operating margin continues to rank low among the states.

16. During the period 1980-1985, Maine hospital utilization declined by 9.3 percent, from 1,693,134 adjusted patient days to 1,548,628 days. During the same period, total expenses rose 64.1 percent, and revenues rose 67.3 percent, while the medical care component of the national consumer price index (CPI) rose 50.4 percent.

17. Maine had 157 physicians per 100,000 population in 1980; the national average was 202 per 100,000. Cumberland County had two and one half times the number of physicians per population that Waldo County had in 1982.

18. The cost of nursing home care in Maine has risen about 5 to 6 percent a year for the past five years.

19. Maine had in 1982 66.1 long-term care beds per thousand population over 65 years old, compared to the national ratio of 54.7.

20. A percentage of hospital beds continues to be filled with patients awaiting placement at lower levels of care. In 1985, the figure was 12.57 percent of the hospital beds in southern Maine.

21. CON has not been an important tool for meeting cost, access, and quality goals for home health care in Maine. These goals have been furthered through Medicaid program initiatives and demonstration programs.

B. Summary of Recommendations

1. Continue certificate of need (CON) in Maine. Narrow the scope of reviews and refocus on elements essential to goals of cost containment, access to care and quality of care.

2. Continue a limit (cap) on annual increases in hospital costs.

3. Require CON review of large capital expenditures. Raise the dollar threshold for hospitals. Consider having a separate, lower threshold for other types of facilities.

4. As an alternative, to raising the capital expenditure threshold for hospitals, eliminate it and raise the threshold for third-year annual operating costs.

5. Continue CON review of proposed new services.

6. Use CON to regulate specialized services, such as open heart surgery, for which quality standards are available. Adopt standards for such services for which there are now none in Maine.

7. Continue to review new major medical equipment costing $300,000 or more, but deregulate replacement of it.

8. Deregulate services that are essentially dependent on a speciality physician, such as psychiatry and orthopedic surgery.

9. Designate services for which long range plans for regionalization will be developed. Then establish moratoria on further CON approval of them until long-range regional plans are developed.

10. Cover a limited number of high tech outpatient services, regardless of setting. Such services as magnetic resonance imaging (MRI) and lithotrypsy would require CON review whether proposed by hospitals, freestanding facilities, or groups of individual physicians or physician groups.

11. Consider limiting CON coverage of outpatient services. Three options are available to provide some discipline to hospitals in offering outpatient services.

    a. Continue to allow hospitals to cross subsidize them from inpatient services, but continue to use CON review to provide discipline.

    b. Discontinue CON coverage of hospital outpatient services, and separate their revenues out from the hospital revenues regulated by rate setting, allowing hospitals to compete freely with non-hospital providers.

    c. Allow individual hospitals to choose between the above two options.

12. Develop a system to ensure that all long-term care patients receive appropriate amounts and kinds of care. Include pre-admission screening and on-going utilization review programs.

13. Continue efforts to develop a case-mix reimbursement system for long-term care, under which facilities and home care agencies would be paid on the basis of the resources required to care for their patients, depending on their medical and other needs.

14. While continuing the Legislature's limitation on new intermediate care (ICF) beds, continue efforts to strengthen planning for long-term care on a population basis.

15. Delete home health care from CON review, whether provided by hospitals or independent entities, while reviewing the licensing process to ensure effective regulation of quality of home care.

16. Revise Maine's planning/CON process in the following ways:

    a. Revise existing statewide quantitative standards so as to apply to small areas within Maine. Where criteria do not exist, adapt criteria developed in other states, using a public process, and establishing moratoria as needed for specific services during the adoption process.

    b. Develop a process of institution-specific planning by the state, with the participation of providers in the development of the process and in the specific planning under it.

    c. Expand staff planning and review skills through use of other state staff and increased use of consultants for specific activities.

d. Continue to monitor and report on timeliness of CON reviews, while improving the efficiency of the review process through raised dollar thresholds, more focused coverage by types of services and facilities, and adoption of administrative reviews.

e. Require that unapproved CON projects that are carried over to the following year compete equally with newly proposed projects.

f. Undertake a comprehensive study of data needed for planning/CON, including hospital data linked to financial data, existing data, and current data needs and how they can be met.

INTRODUCTION

This final report of a study of Maine's certificate of need (CON) and planning program has been prepared by the Alpha Center and its subcontractor, Lewin and Associates, Inc., for the Maine Bureau of Medical Services. Its purpose is to assist the Bureau and its CON Workgroup in their consideration of whether CON should be continued in Maine, and if so, how it should be structured and how the effectiveness of the reviews and supporting planning process could be improved.

Development of CON Programs in the United States

The first CON program was instituted in New York in 1966, and was soon followed by similar programs in other states, especially more densely populated states in the Northeast. With the advent and rapid growth of Medicare and Medicaid, payment to hospitals and nursing homes for services was coming increasingly from third-party payers. Much of this reimbursement was cost-based -- whatever that was spent, within reason, was reimbursed, including capital costs. The purpose of CON was to limit capital spending by health care facilities to that which met a test of public need. In addition, it was hoped that, at the same time and in conjunction with health planning, proposed spending that was disapproved by CON review would be redirected to areas and services identified as in need of capital.

Additional states established CON programs, and at the end of 1974 more than twenty states had such laws. Their programs varied in the types of facilities and services covered by them, but most of them covered at least hospitals and nursing homes. In 1975, P.L. 93-641, the National Health Planning and Resources Development Act was enacted, providing for grants to states and regional health systems agencies (HSAs) to perform health planning and conduct CON reviews. The federal program established minimum standards for state CON programs in matters such as types of facilities to be covered and the procedures and criteria to be used in reviews. By 1980, all states had enacted CON legislation, except Louisiana, which continued to

review proposed capital expenditures by health facilities under a similar program (Section 1122 of the Social Security Act).

With the lessening of federal requirements for CON programs in recent years, and their elimination in 1987, a number of states have reviewed their health planning and CON programs to determine what changes should be made in them or whether they should be retained. Idaho, New Mexico, and Minnesota eliminated CON, but continued to review proposed capital expenditures under the Section 1122 program. Texas repealed CON but enacted a moratorium on major construction activities. California, Kansas, and Wyoming eliminated all regulation of capital expenditures. Many of the remaining states have changed their CON programs in various ways, by raising dollar thresholds for review, focusing review activity, or changing the facilities or services covered. At present, 43 states have CON, an additional three states use section 1122 review only, and one state has only a moratorium in effect. Thus, 47 states continue to have some form of capital expenditure control.

CON in Maine

Maine's CON program was enacted in 1978[1], and has been amended several times, most recently in 1986. The legislation states that its purpose is to promote effective health planning; assist in providing quality health care at the lowest possible cost; avoid unnecessary duplication in health facilities and health services; assure that state funds are not used to support unnecessary health capital expenditures; permit consumers of health services to participate in the process of determining the distribution, quantity, quality and cost of health services; and provide for a certificate of need program which meets the federal requirements.

In April 1986, the Legislature's Human Resources Committee issued a study report on Maine's CON program.[2] Originally intended to be a complete

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1 22 MRSA c.103, sec. 301 et seq.

2 "Certificate of Need Study of the Human Resources Committee of the 112th Legislature," Augusta, April 1986.

evaluation of the CON program, it was modified in light of the realization of the complexity of the program and its relationships with other aspects of the state's broader efforts at health planning and cost containment. Instead, it discussed ways that the executive and legislative branches could coordinate their efforts to monitor Maine's health care environment "in a combined effort to maintain accessible quality health care for all Maine citizens at a cost that is reasonably affordable."

The report called on the Health Care Finance Commission to include information of trends in Maine's health care system in its annual report. It also directed the Department of Human Services (DHS) to improve CON procedures by meeting with applicants prior to submission of applications (i.e., before or after submission of letters of intent) to determine precisely what information would be required to review applications without undue delays, and to establish and publish review criteria. It supported the Governor's request for an additional staff person for review.

The Committee's report urged a greater sensitivity in health care planning to regional differences in the state. In addition, it recommended a measure to give hospitals increased flexibility to adapt to a changing environment, which resulted in legislation establishing the Individual Hospital Component of the Hospital Development Account -- the annual cap on reimbursement for new capital expenditures by hospitals.

At the same time, the Bureau of Medical Services, DHS, was moving to streamline the CON program and increase its effectiveness. To advise and assist in this process, a CON Workgroup was established in early 1986, consisting of representatives of various parts of the health care industry, including insurers, and co-chaired by the Bureau Director and the Vice President for Corporate Development of a major Maine hospital. A list of Workgroup members is in Appendix B.

I. STUDY APPROACH AND METHODOLOGY

Study Approach

The study explores a number of related questions. The first is whether and to what extent Maine should continue its CON program. The assessment of whether to continue CON was to be based upon a consideration of the purposes the program could serve and the broad service areas that it could cover. If there should be agreement on continuing the program and on its broad purposes, what changes should be made to achieve those purposes efficiently and effectively?

In carrying out this study, the Alpha Center reviewed and assessed the issues surrounding the regulation of Maine's health care system through CON and rate setting, including the perception of recent experience by state and industry leaders. The study reviewed the approaches and experiences of selected other states in achieving similar goals through CON. It has considered trends and possible contingencies in Maine, including the retention, modification or termination of the hospital rate-setting program and the CON program. Our initial findings were presented to the CON Workgroup at its meeting on February 9, and comments and suggestions were received.

On the basis of the findings and analyses, tentative recommendations were developed and discussed with the Co-Chairs of the CON Workgroup. Recommendations were then revised as appropriate and incorporated into this final report.

Chapter II presents information on trends in Maine's health care system and compares them to the nation as a whole. Chapter III presents our findings as to Maine's existing goals for the acute care and ambulatory care sectors of its system, the changes occurring in these sectors and our recommendations as to whether and how CON should apply to specific parts of those sectors. Chapter IV provides similar findings and recommendations for

the long-term care and home health care sectors. In Chapter V recommendations are offered for improving the efficiency and effectiveness of health planning and CON for those components of the health care system that may continue to be regulated by CON.

In order to explore the questions involved in the study and arrive at recommendations that would be of use to the Workgroup, the Alpha Center developed a study methodology, the key features of which can be summarized as follows:

1. **Issue Analysis**. Staff analysis of the issues in Maine's health care system and the regulation of it through CON and rate setting. Changes and trends in recent years were reviewed through documents and data from the Department of Human Services, the Health Care Finance Commission, providers in Maine and the American Hospital Association. Interviews were held with leaders in all sectors of the industry in Maine, the CON Workgroup, legislators, and key state staff members concerned with the CON and rate-setting programs. A list of those interviewed appears in Appendix A, together with the interview protocol.

2. **Options Analysis**. Various options for achieving Maine's goals for the health care system were analyzed, including regulation through health planning/CON, rate setting, licensing, and deregulation of components of the system. Evidence was sought in the experiences of other states that had chosen various of these options. Evidence was sought in Maine's experience as to the extent to which economic discipline has developed in the health care market to the point that reduction or elimination of CON would be prudent to consider. (See the discussion of economic discipline below.)

3. **Review with the Workgroup**. At a meeting of the CON Workgroup, project staff presented their initial findings as to Maine's existing goals for health planning and CON, changes taking place in the health care system, and types of CON regulation that would be appropriate, with and

without continuation of hospital rate setting. Comments and suggestions were received from the Workgroup.

4. **Development of Recommendations**. Based on the meeting with the Workgroup, project staff obtained additional information on Maine's health care system and other states' experience, and developed recommendations for changing CON regulation of various components of the health care system. These were reviewed with the Co-Chairs of the Workgroup and are presented in this report.

Economic Discipline in the Health Care System.

Nationally, states enacted certificate of need laws in a period in which there were open ended cost and charge based reimbursement by major payers and in which there were only limited controls on utilization. In such an environment, there were few penalties for investing in plant, equipment or services that were unneeded, duplicative, or overbuilt. Certificate of need, while not designed to control overall health care costs, was intended to provide outside review and constraint on unneeded investment -- to substitute for the economic discipline then absent from the market.

Applied to the health care system, economic discipline implies:

- Systems in which providers have only limited control over the volume of services demanded or operate in environments in which there are substantial downward pressures on use.

- Systems that impose restraints on prices and charges and that require providers to make decisions in a revenue constrained environment.

- Shifting of utilization to the most efficient and effective settings, which given the heavy historical reliance on inpatient

care, generally implies movement of services into outpatient and noninstitutional settings.

- Development of patterns of investment that are consistent with the conditions above: less in inpatient services and facilities, more in outpatient services, slower replacement of plant, higher thresholds of effectiveness before new equipment and services are introduced.

Economic discipline is a broader concept than competition. Competition requires multiple providers. Economic discipline can occur in single provider settings if payers are effective in their price and use controls.

In the period since certificate of need has been enacted, there have been substantial changes in the health care market. Prospective payment systems have been introduced for hospital services by at least some large payers; utilization control programs, including concurrent review, second surgical opinion and required treatment on an outpatient basis, have been expanded; prepaid, at-risk capitated programs such as HMOs have been expanded, and new forms such as PPOs have been created. The question in a given state, such as Maine, is whether the discipline that these efforts impose has developed sufficiently to reduce or eliminate the need for certificate of need.

II. FORCES AND TRENDS IN HEALTH CARE: MAINE AND THE UNITED STATES

Certificate of need was adopted out of a belief that (1) the hospital reimbursement system in use, cost- and charge-based reimbursement, created opportunities to overinvest in facilities and services with minimal financial risk and thus encourage overinvestment, (2) that certain services were best regionalized to assure both efficiency and quality, and (3) that unrestrained market driven investment, while it might oversupply in some areas could leave certain areas or populations with few resources with too little access to care. Part of the interest in reexamining the role of CON, stemming from changing market and reimbursement for health services, is in how these are likely to affect decisions to develop facilities and services.

In assessing whether to continue to control health services and capital expenditures through a CON and health planning process, this study compared Maine to the United States and the other New England states on a number of selected characteristics. What follows in summary fashion is a quick overview of how Maine compares on a number of demographic, economic and health system variables. This comparative analysis of forces and trends was designed to assess their relevance and magnitude, and their implications for continuing CON type regulation.

Population

Tables 1 and 2 below show that Maine and New England are growing in population and their growth rates have been about the same over the last 25 years. Both are growing more slowly than the United States as a whole. A growing population will likely require more health care services and facilities, or changes in the kinds and mix of services.

TABLE 1

Population
(Thousands)

	1960	1970	1980
Maine	969	994	1,125
New England	10,509	11,848	12,348
United States	179,323	203,302	226,546

* Population and economic data, except where noted, are taken from the State and Metropolitan Area Data Book, 1986, Bureau of the Census.

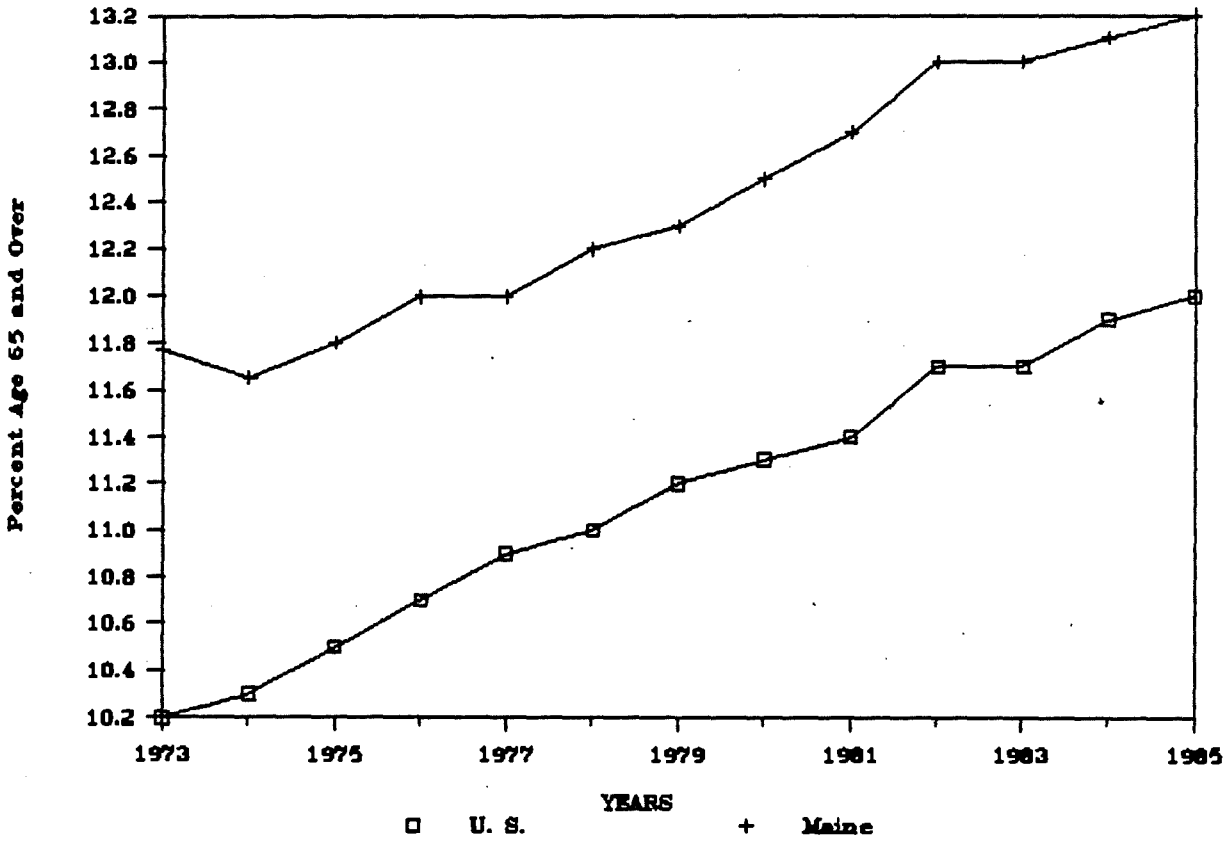
TABLE 2

Percent Changes in Population

	1960-70	1970-80	1980-85	1960-85
Maine	2.6	13.2	3.5	20.1
New England	12.7	4.2	.5	20.5
United States	13.4	11.4	5.4	33.1

Within the population, the distribution by age affects the amount and kinds of health care needed. The population over 65 years old is especially important. Graph 1 compares Maine's elderly population with that of the United States.

GRAPH 1: Percentage of Population 65 Years and Older
(U.S. Bureau of Census, P-25 Population Estimate Series)



All three population groups are aging, but Maine and New England continue to have a larger percentage of elderly than the United States. (The data on which this and subsequent graphs are based are provided in Appendix C.)

* * * * *

The need for acute and long-term care is affected by the proportion of the population that is older and in need of increased care. Projections in Table 3 were made by the Bureau of Medical Services for three categories of elderly population.

TABLE 3
Maine Population Projections

	Est.	Projected		Percent Change
	1984	1989	1994	1985-1994
All Ages	1,156,680	1,204,420	1,220,710	5.5
65-74 Years	89,130	95,900	97,760	9.7
75-84 Years	48,650	53,230	54,820	12.7
85 Years and Older	16,270	19,120	20,970	28.9
All 65 Years and Older	154,050	168,250	173,550	12.7

* Derived from data in "1985-1994 Population Projections," Maine Department of Human Services, Office of Data, Research and Vital Statistics, July 1986.

Based on current data, the older the age group, the greater percentage growth that has been projected, with the 85 and older group growing three times as fast as the 65-74 group.

Economic Factors

Table 4 below compares Maine to New England and the United States on several factors that are clearly related to the ability of people to pay for health care.

TABLE 4

Personal Income Per Capita and Percentage Below Poverty Level

		Maine	New England	United States
Personal income per capita in constant (1972) dollars				
	1970	3,426	4,466	4,092
	1980	4,333	5,603	5,304
	1984	4,906	6,543	5,803
State rank	1970	37		
	1980	42		
	1984	37		
Percent below poverty level				
Persons	1969	13.2	8.7	13.3
	1979	13.0	9.6	12.4
Families	1969	10.3	6.7	10.7
	1979	9.8	7.4	9.6

In personal income per capita, Maine continues to be below the United States and well below New England. The percentage of persons and families below the poverty level has risen to slightly above the U.S. and continues to be well above New England.

Health System Characteristics

The characteristics of the health systems of Maine and the United States are compared below in terms of capacity, utilization, and finances.

Systems Capacity. Changes taking place in the capacity of the health care system include changes in numbers and sizes of hospitals, and numbers of acute care and long-term care beds in relation to population.

Maine has 42 short-term, general, non-governmental hospitals. These are listed in Table 5, on the following page. There are a total of 4,466 general acute care beds. In addition, one 96-bed non-governmental psychiatric hospital opened in 1985, and one rehabilitation hospital with 25 acute rehabilitation beds opened in 1986, bringing the total to 4,581 non-governmental acute care beds.

The numbers of short-term general acute care beds per population is an important measure of hospital capacity, affecting cost, access to care, and quality of care. The ratios for Maine and the United States are shown in Graph 2.

Graph 2 shows that both Maine and the United States have followed a general trend of increasing the bed ratio, during the early seventies especially, and decreasing it since the late seventies. During the period from 1974 to 1982, Maine's bed ratio was notably higher than the national ratio, but by 1985 both had fallen to 4.2 beds per thousand.

TABLE 5

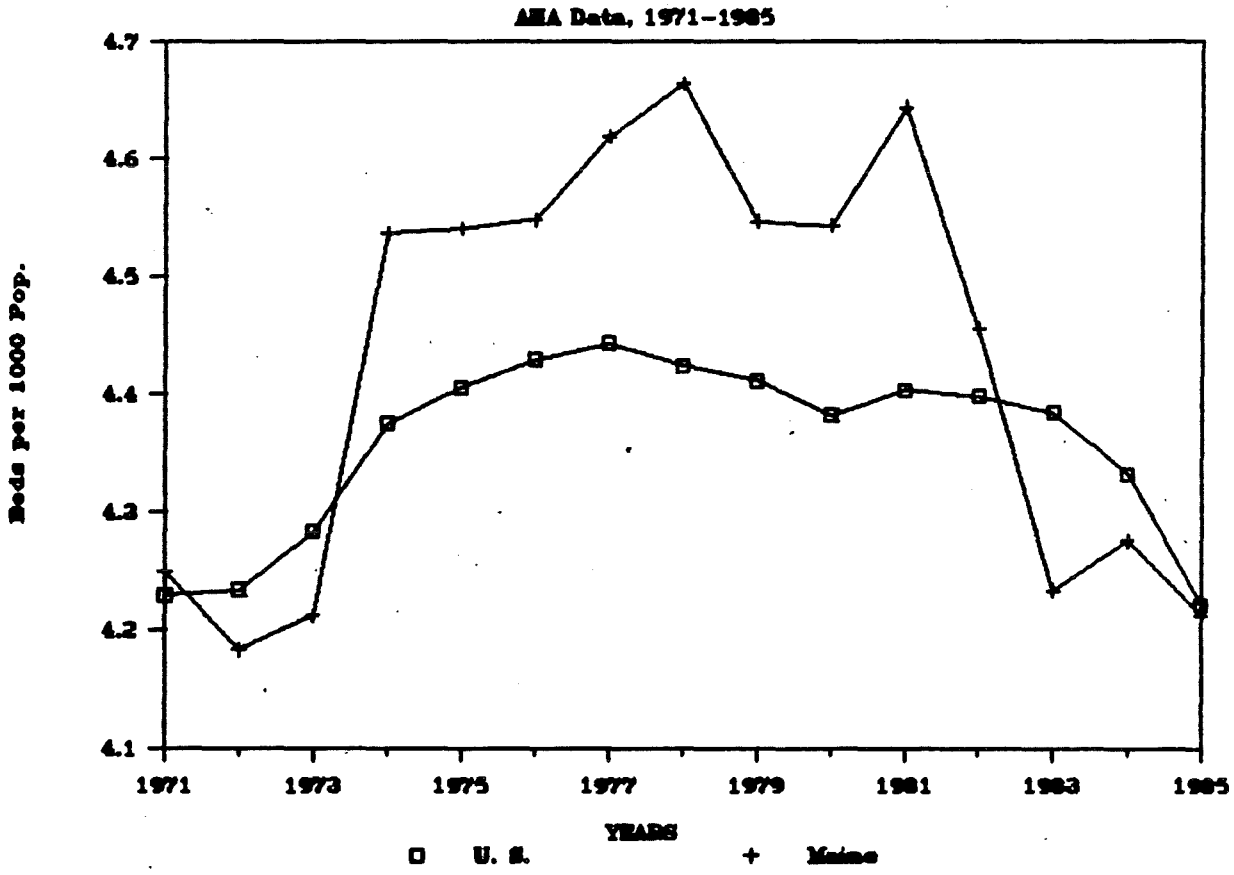
Maine Short-Term, General, Non Governmental Hospitals

Alphabetical Order

	Acute Beds 1985	Percent Occupancy 1984	1985
Aroostook Medical Center, Presque Isle	143	50.3	51.9
Bath Memorial Hospital, Bath	59	44.1	39.0
Blue Hill Memorial Hospital, Blue Hill	26	80.8	76.9
Calais Regional Hospital, Calais	77	45.3	27.3
Cary Medical Center, Caribou	65	81.5	73.8
Castine Community Hospital, Castine	12	33.3	25.0
Central Maine Medical Center, Lewiston	250	69.6	64.0
Down East Community Hospital, Machias	38	73.7	68.4
Eastern Maine Medical Center, Bangor	394	80.1	78.2
Franklin Memorial Hospital, Farmington	70	68.6	65.7
Henrietta D. Goodall Hospital, Sanford	73	63.0	68.5
Houlton Regional Hospital, Houlton	65	45.3	50.8
(Jackson Brook Institute, South Portland, 96 Psychiatric Beds)			
Kennebec Valley Medical Center, Augusta	204	62.3	65.2
Maine Coast Memorial Hospital, Ellsworth	64	59.4	50.0
Maine Medical Center, Portland	556	89.9	89.0
Mayo Regional Hospital, Dover-Foxcroft	52	67.3	65.4
Mercy Hospital, Portland	200	82.0	83.0
Mid-Maine Medical Center, Waterville	276	69.7	71.7
Miles Memorial Hospital, Damariscotta	27	62.9	55.6
Millinocket Regional Hospital, Millinocket	50	62.0	44.0
Mount Desert Island Hospital, Bar Harbor	66	51.5	45.5
Northern Cumberland Memorial Hospital, Bridgton	40	67.5	72.5
Northern Maine Medical Center, Fort Kent	70	40.0	35.7
Osteopathic Hospital of Maine, Portland	160	71.9	68.8
Parkview Memorial Hospital, Brunswick	55	67.3	60.0
Penobscot Bay Medical Center, Rockport	106	76.4	77.4
Penobscot Valley Hospital, Lincoln	44	59.1	47.7
Redington-Fairview General Hospital, Skowhegan	92	45.7	45.7
Regional Memorial Hospital, Brunswick	90	55.6	56.7
Rumford Community Hospital, Rumford	97	51.5	41.2
Sebasticook Valley Hospital, Pittsfield	36	--	36.1
Southern Maine Medical Center, Biddeford	150	73.3	74.7
St. Andrews Hospital, Boothbay Harbor	32	34.4	37.5
St. Joseph Hospital, Bangor	130	49.2	39.2
St. Mary's General Hospital, Lewiston	233	60.1	57.9
Stephens Memorial Hospital, Norway	50	74.0	74.0
Taylor Osteopathic Hospital, Bangor	60	31.7	20.0
Van Buren Community Hospital, Van Buren	29	41.4	17.2
Waldo County General Hospital, Belfast	49	55.1	53.1
Waterville Hospital, Waterville	78	65.4	67.9
Westbrook Community Hospital, Westbrook	30	43.3	40.0
York Hospital, York	68	61.8	63.2

Source: Derived from data in AHA Guide, 1985 and 1986.

GRAPH 2: Beds Per 1,000 Population



* * * * *

Maine's community hospitals remain considerably smaller on the average than hospitals nationally. The average size in Maine has grown, however, from 93 in 1971 to 116 in 1985. Graph 3 displays the growth in average size compared to the national average.

Maine's increasing average size since 1971 seems to be the result both of decreasing numbers of hospitals and increase in total beds. The slight decline in 1985 is largely due to bed closure.

Table 6 on the following page shows Maine's hospitals in descending order of size.

GRAPH 3: Average Hospital Size

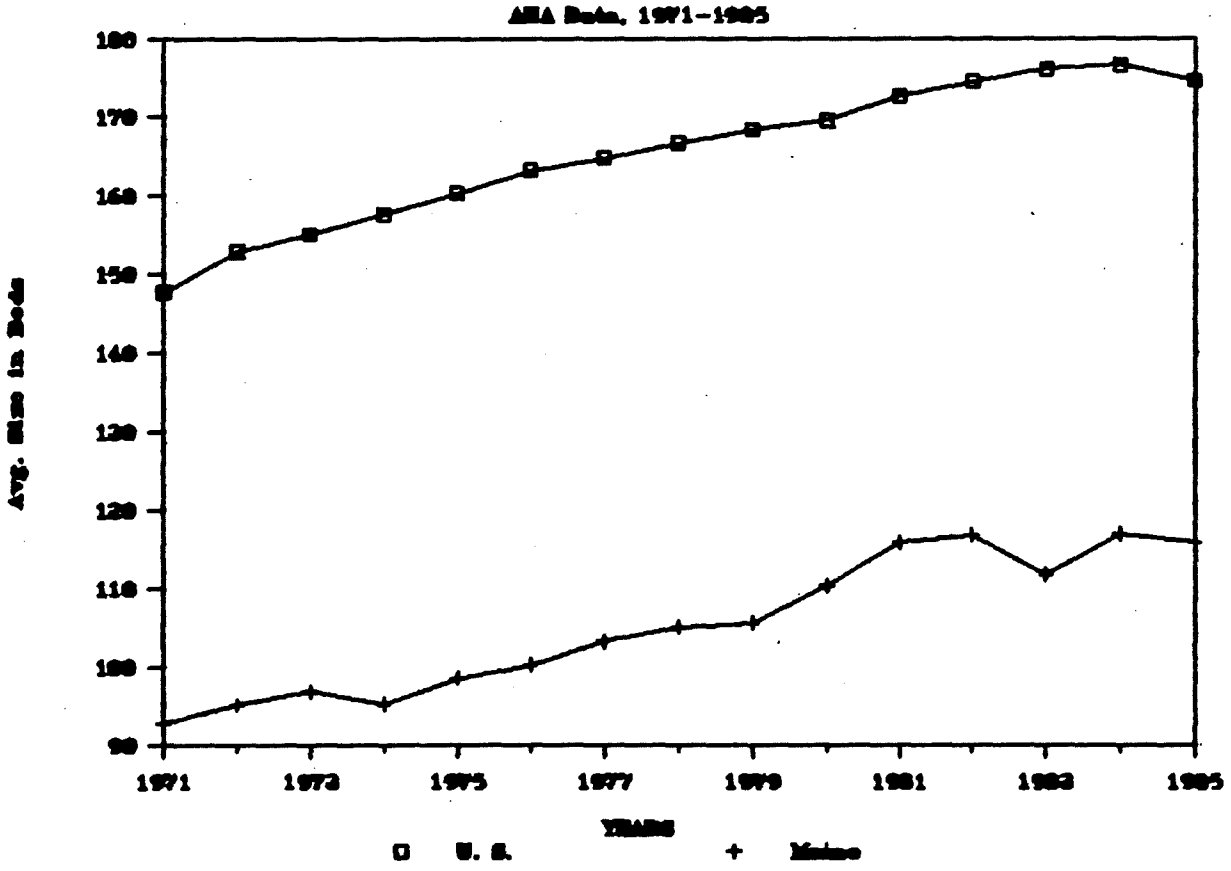


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TABLE 6

Maine Short-Term, General, Non Governmental Hospitals

Descending Order of Size

	Acute Beds 1985	Percent Occupancy 1984	1985
Maine Medical Center, Portland	556	89.9	89.0
Eastern Maine Medical Center, Bangor	394	80.1	78.2
Mid-Maine Medical Center, Waterville	276	69.7	71.7
Central Maine Medical Center, Lewiston	250	69.6	64.0
St. Mary's General Hospital, Lewiston	233	60.1	57.9
Kennebec Valley Medical Center, Augusta	204	62.3	65.2
Mercy Hospital, Portland	200	82.0	83.0
Osteopathic Hospital of Maine, Portland	160	71.9	68.8
Southern Maine Medical Center, Biddeford	150	73.3	74.7
Aroostook Medical Center, Presque Isle	143	50.3	51.9
St. Joseph Hospital, Bangor	130	49.2	39.2
Penobscot Bay Medical Center, Rockport	106	76.4	77.4
Rumford Community Hospital, Rumford	97	51.5	41.2
Jackson Brook Institute, South Portland, 96 Psychiatric Beds			
Redington-Fairview General Hospital, Skowhegan	92	45.7	45.7
Regional Memorial Hospital, Brunswick	90	55.6	56.7
Waterville Hospital, Waterville	78	65.4	67.9
Calais Regional Hospital, Calais	77	45.3	27.3
Henrietta D. Goodall Hospital, Sanford	73	63.0	68.5
Franklin Memorial Hospital, Farmington	70	68.6	65.7
Northern Maine Medical Center, Fort Kent	70	40.0	35.7
York Hospital, York	68	61.8	63.2
Mount Desert Island Hospital, Bar Harbor	66	51.5	45.5
Cary Medical Center, Caribou	65	81.5	73.8
Houlton Regional Hospital, Houlton	65	45.3	50.8
Maine Coast Memorial Hospital, Ellsworth	64	59.4	50.0
Taylor Osteopathic Hospital, Bangor	60	31.7	20.0
Bath Memorial Hospital, Bath	59	44.1	39.0
Parkview Memorial Hospital, Brunswick	55	67.3	60.0
Mayo Regional Hospital, Dover-Foxcroft	52	67.3	65.4
Stephens Memorial Hospital, Norway	50	74.0	74.0
Millinocket Regional Hospital, Millinocket	50	62.0	44.0
Waldo County General Hospital, Belfast	49	55.1	53.1
Penobscot Valley Hospital, Lincoln	44	59.1	47.7
Northern Cumberland Memorial Hospital, Bridgton	40	67.5	72.5
Down East Community Hospital, Machias	38	73.7	68.4
Sebasticook Valley Hospital, Pittsfield	36	--	36.1
St. Andrews Hospital, Boothbay Harbor	32	34.4	37.5
Westbrook Community Hospital, Westbrook	30	43.3	40.0
Van Buren Community Hospital, Van Buren	29	41.4	17.2
Miles Memorial Hospital, Damariscotta	27	62.9	55.6
Blue Hill Memorial Hospital, Blue Hill	26	80.8	76.9
New England Rehabilitation Hospital (Portland, 25 acute rehabilitation beds)			
Castine Community Hospital, Castine	12	33.3	25.0

Source; Derived from data in AHA Guide, 1985 and 1986.

Non-governmental long-term care beds have increased in numbers recently. Beds licensed for skilled nursing care increased from 409 in 1982 to 421 in 1984, and beds licensed for intermediate care from 8,511 to 8,623 in the same period. Long-term care bed capacity is usually measured, however, in relation to the population aged 65 and older. Table 7 shows Maine and U.S. figures.

TABLE 7

Long-Term Care Beds per Thousand*

	1969	1973	1976	1980	1982
Maine	30.9	57.3	54.9	63.5	66.1
United States	43.4	56.8	56.3	57.2	54.7

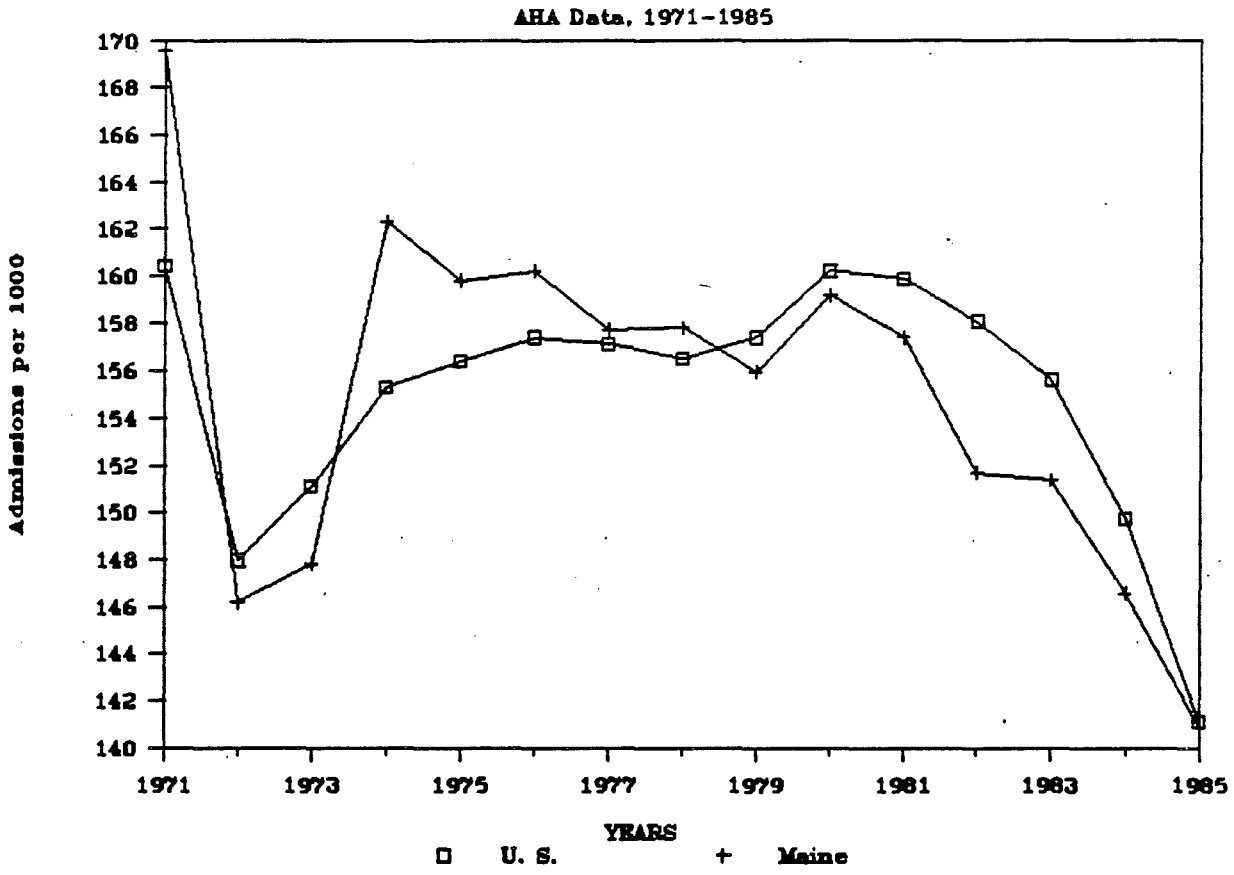
* Beds per thousand population 65 years and over in nursing and related care homes with 25 or more beds. Sources: Data for 1969-1980 are from The Universal Health Care Almanac, 1984-85, Phoenix, R-C Publications, Inc., citing data from Public Health Statistics, 1982 published by U.S. DHHS. Data for 1982 are from the State and Metropolitan Area Data Book 1986, Bureau of the Census, 1986.

Table 7 shows that nationally the supply of long-term care beds has increased greatly from 1969 to 1980 rising by more than 30 percent. In Maine it has increased even faster, more than doubling during that period.

Utilization of Services

There are several measures of the utilization of acute care services. Graph 4 shows hospital admissions in relation to population.

GRAPH 4: Admissions Per 1,000 Population

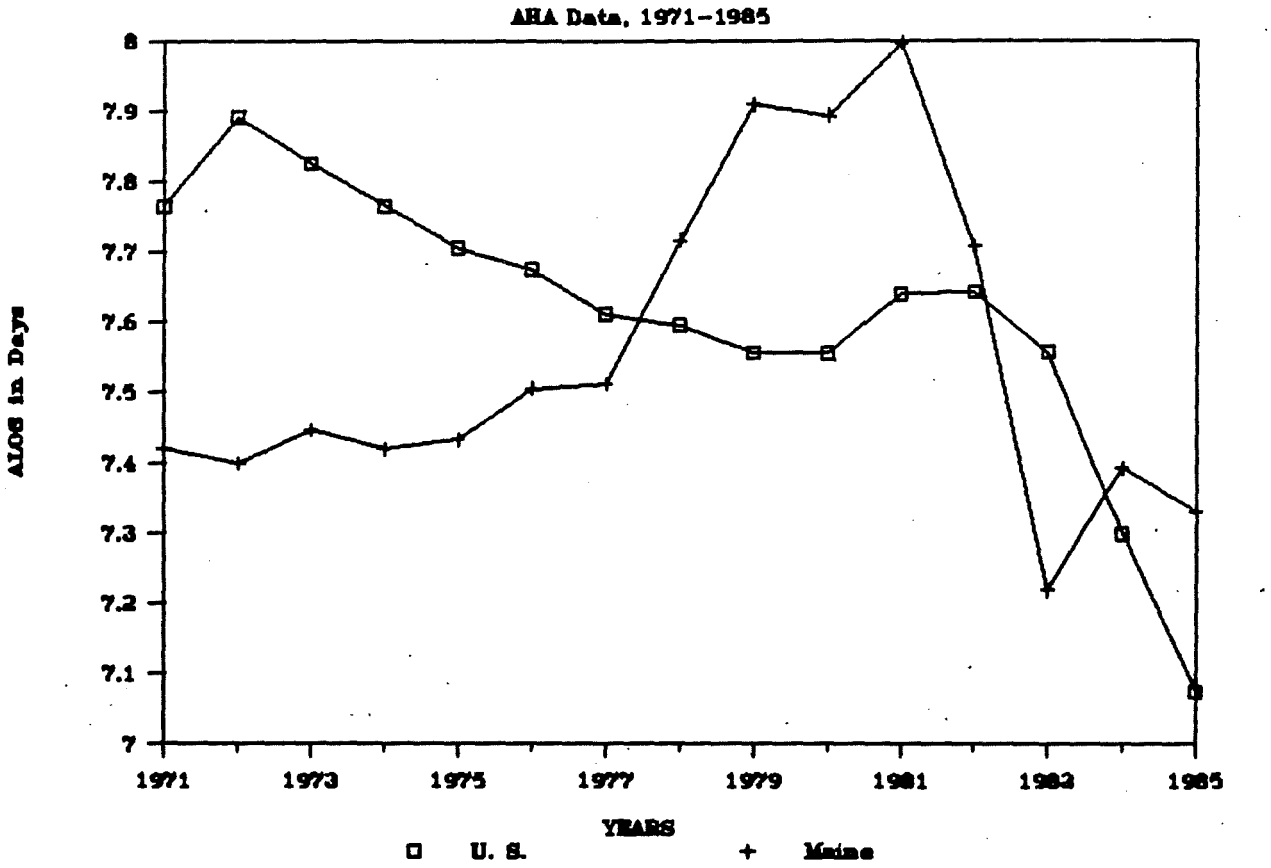


Graph 4 shows that the trend in admissions in Maine has been generally downward since 1974, a trend that has occurred nationally only since 1980. Maine shows admissions declining most sharply since 1983. This trend seems to reflect the increase in outpatient care and perhaps preventive care, although comparable statistics are not available.

* * * * *

Utilization of hospital services is also affected by how long patients are in the hospital -- average length of stay.

GRAPH 5: Average Length of Stay



The United States shows a generally declining average length of stay since 1972, with only a slight rise in 1981-1983. Maine, after rather sharp increases in 1977-1981, showed a sharp reduction, consistent with the national trend, until 1983. It is not clear whether the upturn in Maine in 1984 represents a significant change in direction in this trend or is only a minor interruption in an overall downward trend. Data from MHCFC, not included here (because not comparable to national data), show a continued downward movement in 1984 and 1985, followed by an upward movement in 1986. Length of stay would thus be an important variable for Maine to monitor closely.

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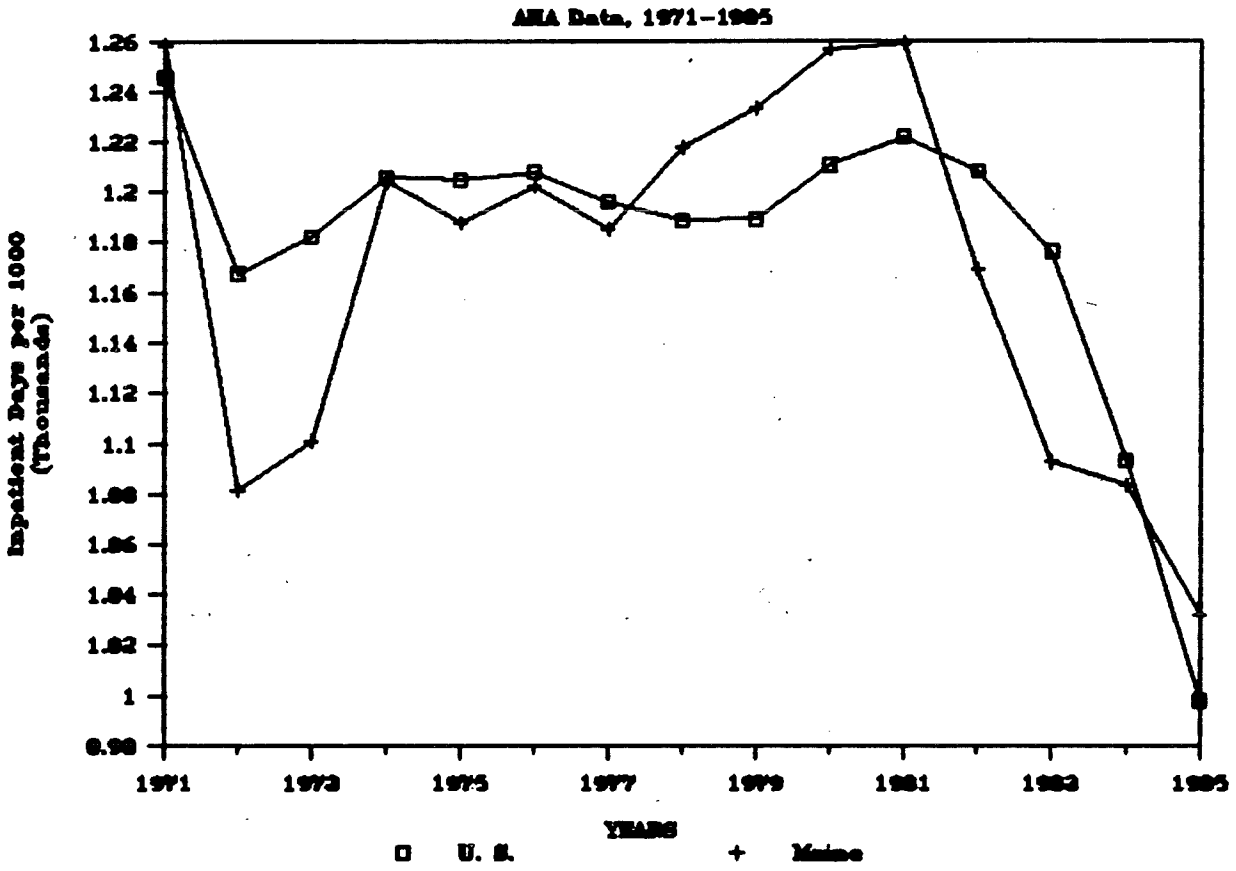
The effects, taken together, of admissions per thousand population and average length of stay can be expressed in inpatient days per thousand population.

GRAPH 6: Inpatient Days Per 1,000 Population

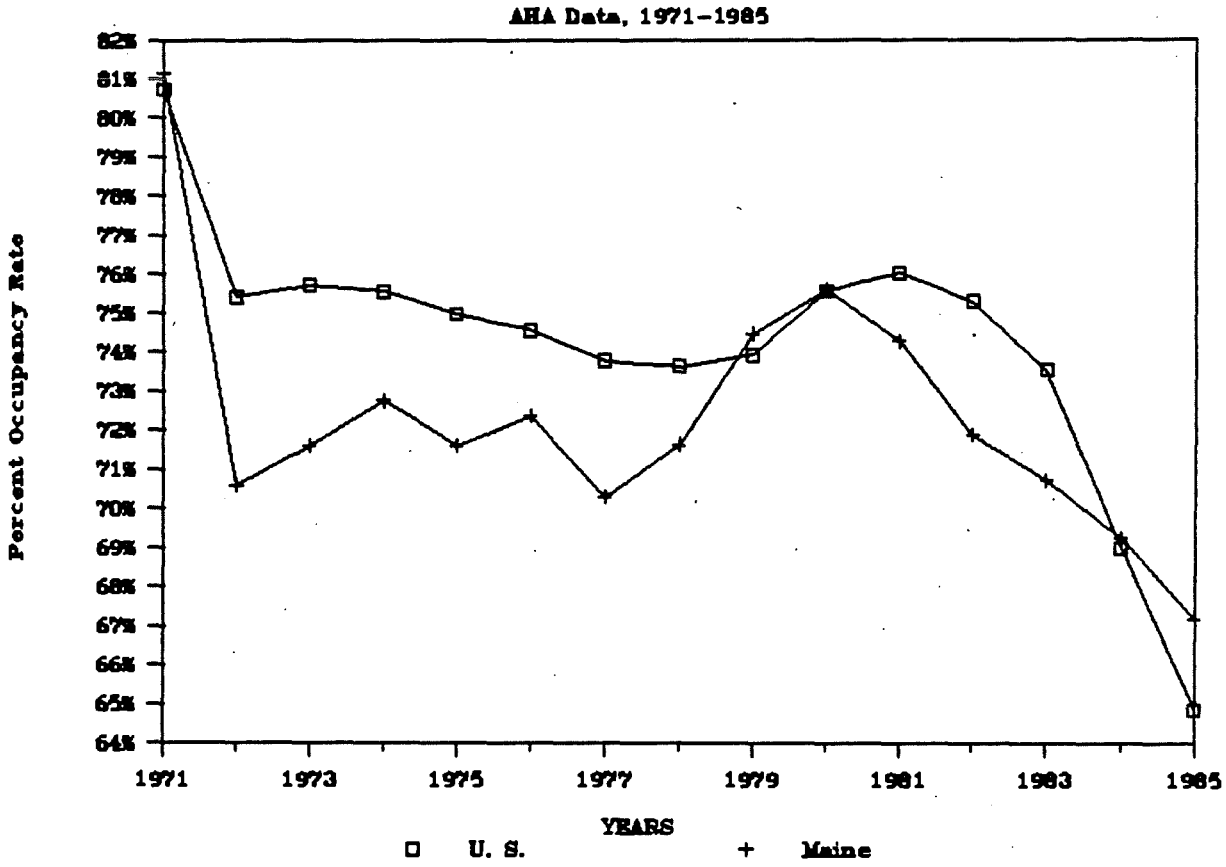


Maine showed a somewhat greater increase than the United States from 1973 to 1981, and has shown a similar sharp decline since then, with utilization now slightly above the national average.

* * * * *

Occupancy rate, the percentage of a hospital's beds that are occupied on the average, show the relationship between utilization (in patient days) and hospital capacity (in numbers of beds).

GRAPH 7: Occupancy Rates



Maine, like the United States, had a slightly declining occupancy rate in the mid-seventies, followed by an increase for several years, then a sharp decline in recent years that has brought the rate lower than at any time since 1971. Low occupancy rates tend to increase average costs, because

fixed costs remain the same as they would be under higher occupancy. Occupancy rates may, of course vary a great deal among hospitals within a state. Table 8 on the following page lists Maine's short stay, general, non-governmental care hospitals in descending order of occupancy rate for 1985.

* * * * *

TABLE 8

Maine Short-Term, General, Non Governmental Hospitals

Descending Order By 1985 Percent Occupancy

	Acute Beds 1985	Percent Occupancy 1984	1985
Maine Medical Center, Portland	556	89.9	89.0
Mercy Hospital, Portland	200	82.0	83.0
Eastern Maine Medical Center, Bangor	394	80.1	78.2
Penobscot Bay Medical Center, Rockport	106	76.4	77.4
Blue Hill Memorial Hospital, Blue Hill	26	80.8	76.9
Southern Maine Medical Center, Biddeford	150	73.3	74.7
Stephens Memorial Hospital, Norway	50	74.0	74.0
Cary Medical Center, Caribou	65	81.5	73.8
Northern Cumberland Memorial Hospital, Bridgton	40	67.5	72.5
Mid-Maine Medical Center, Waterville	276	69.7	71.7
Osteopathic Hospital of Maine, Portland	160	71.9	68.8
Henrietta D. Goodall Hospital, Sanford	73	63.0	68.5
Down East Community Hospital, Machias	38	73.7	68.4
Waterville Hospital, Waterville	78	65.4	67.9
Franklin Memorial Hospital, Farmington	70	68.6	65.7
Mayo Regional Hospital, Dover-Foxcroft	52	67.3	65.4
Kennebec Valley Medical Center, Augusta	204	62.3	65.2
Central Maine Medical Center, Lewiston	250	69.6	64.0
York Hospital, York	68	61.8	63.2
Parkview Memorial Hospital, Brunswick	55	67.3	60.0
St. Mary's General Hospital, Lewiston	233	60.1	57.9
Regional Memorial Hospital, Brunswick	90	55.6	56.7
Miles Memorial Hospital, Damariscotta	27	62.9	55.6
Waldo County General Hospital, Belfast	49	55.1	53.1
Aroostook Medical Center, Presque Isle	143	50.3	51.9
Houlton Regional Hospital, Houlton	65	45.3	50.8
Maine Coast Memorial Hospital, Ellsworth	64	59.4	50.0
Penobscot Valley Hospital, Lincoln	44	59.1	47.7
Redington-Fairview General Hospital, Skowhegan	92	45.7	45.7
Mount Desert Island Hospital, Bar Harbor	66	51.5	45.5
Millinocket Regional Hospital, Millinocket	50	62.0	44.0
Rumford Community Hospital, Rumford	97	51.5	41.2
Westbrook Community Hospital, Westbrook	30	43.3	40.0
St. Joseph Hospital, Bangor	130	49.2	39.2
Bath Memorial Hospital, Bath	59	44.1	39.0
St. Andrews Hospital, Boothbay Harbor	32	34.4	37.5
Sebasticook Valley Hospital, Pittsfield	36	--	36.1
Northern Maine Medical Center, Fort Kent	70	40.0	35.7
Calais Regional Hospital, Calais	77	45.3	27.3
Castine Community Hospital, Castine	12	33.3	25.0
Taylor Osteopathic Hospital, Bangor	60	31.7	20.0
Van Buren Community Hospital, Van Buren	29	41.4	17.2

Source: Derived from data in AHA Guide, 1985 and 1986.

Long-term care utilization figures on a national basis are not available. The data on Maine in Table 9 was derived from the Department of Human Services publication, "Maine Health Facilities: Resources and Utilization, 1984" and corresponding volumes for 1983 and 1982.

TABLE 9

Maine Non-Governmental Long-Term Care Beds and Utilization

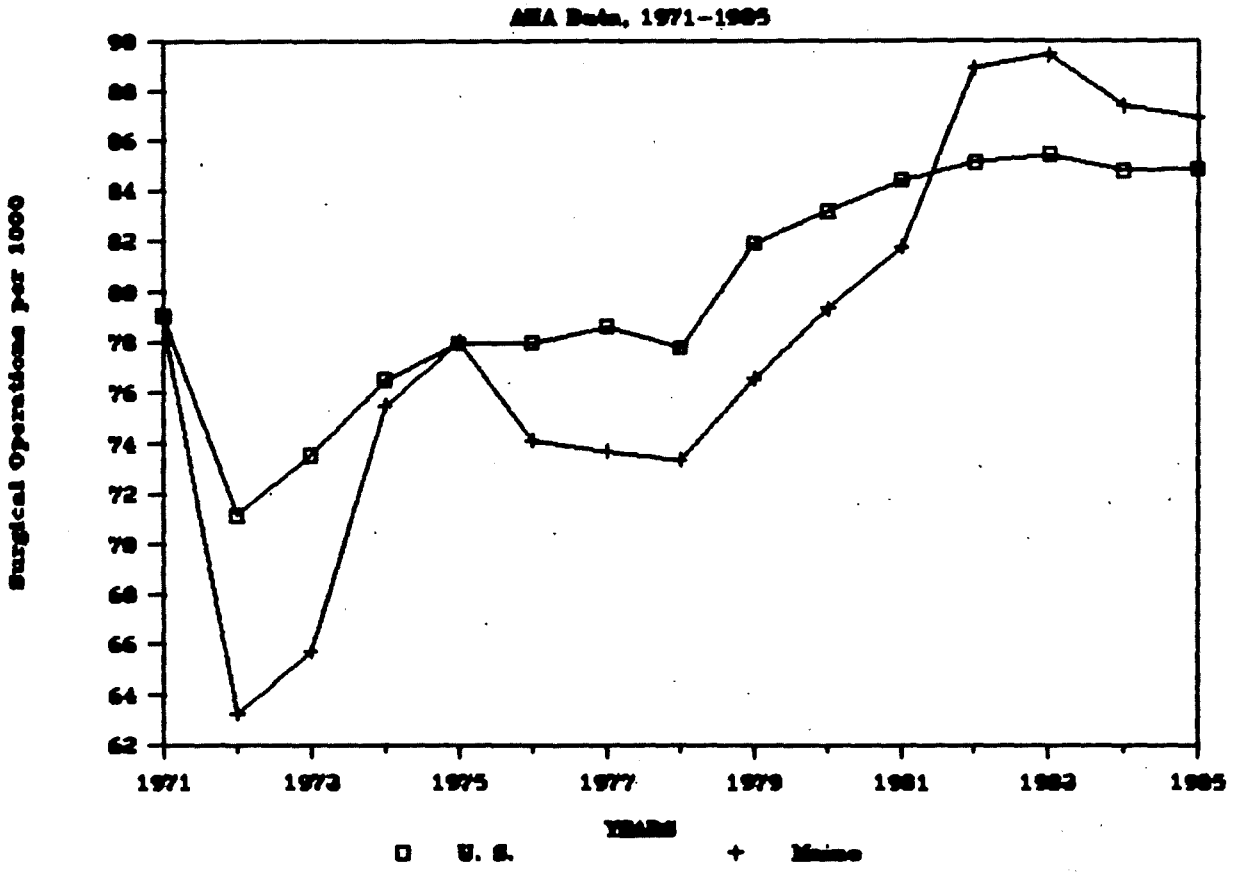
	1982	1983	1984	Percent Change 1982-84
SNF Licensed Beds	409	391	421	
SNF Beds (Responding to DHS Survey)	379	391	421	
SNF Inpatient Days (Responding)	108,167	109,268	115,394	6.7
SNF Occupancy Rate (Responding)	78.2	76.6	75.1	
ICF Licensed Beds	8,511	8,694	8,623	
ICF Beds (Responding)	8,396	8,411	8,598	
ICF Inpatient Days (Responding)	2,956,444	2,961,305	3,075,691	4.0
ICF Occupancy Rate (Responding)	96.5	96.5	98.0	

Reported utilization, in terms of inpatient days, increased by 6.7 percent from 1982 to 1984 for skilled nursing care, and by 4.0 percent for intermediate care. Occupancy rates fell by 3.1 percentage points for skilled nursing care beds, and rose by 1.5 points for intermediate care beds.

* * * * *

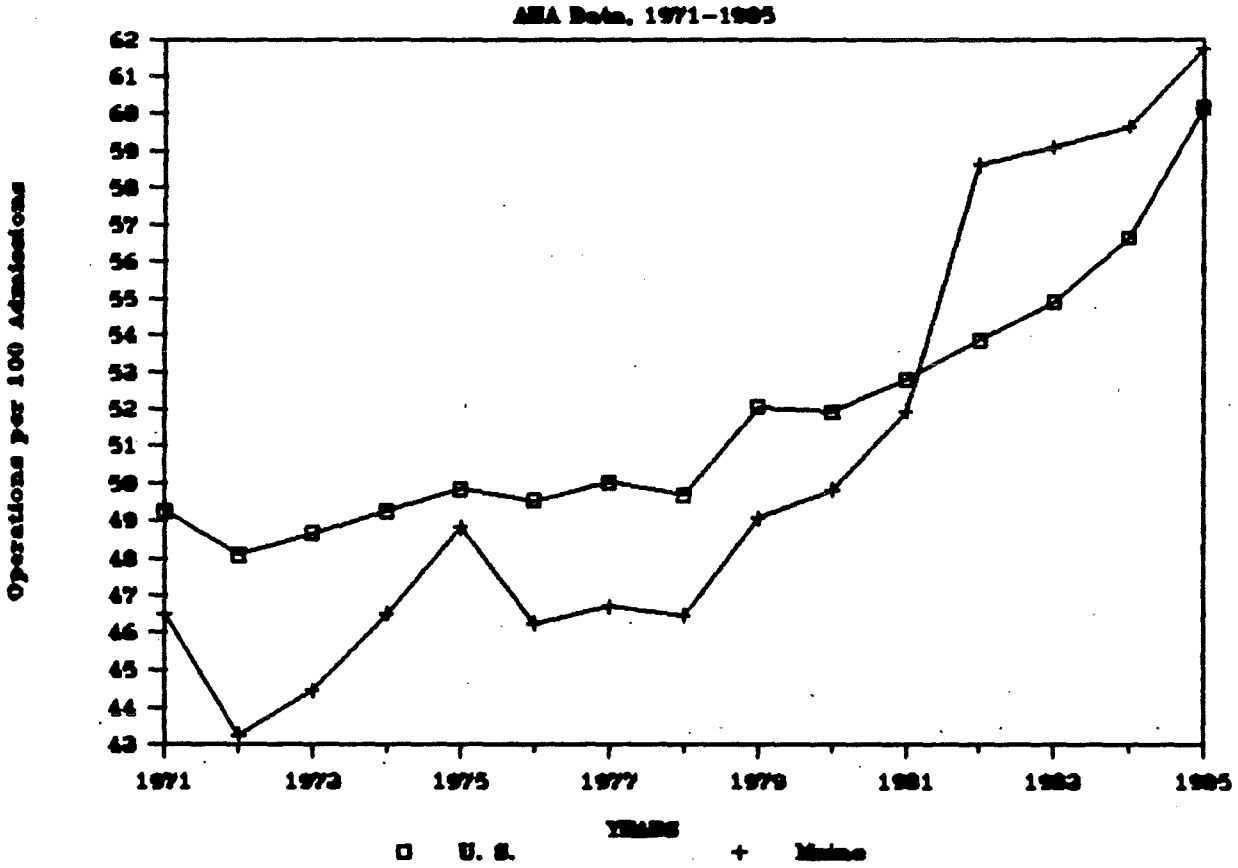
Some data are available on the extent of surgery and the ways hospitals are used as between medical and surgical uses. The changes over time in the numbers of surgical operations per one thousand population and per hospital admission indicate changes in use.

GRAPH 8: Surgical Operations Per 1,000 Population



Graph 8 shows a gradual leveling off nationally in surgical rates per one thousand population, beginning in 1980 and becoming roughly level by 1983. In Maine, the effect occurred later, beginning to level off only in 1983, but it now seems to be falling toward the national rate.

GRAPH 9: Surgical Operations Per 100 Admissions

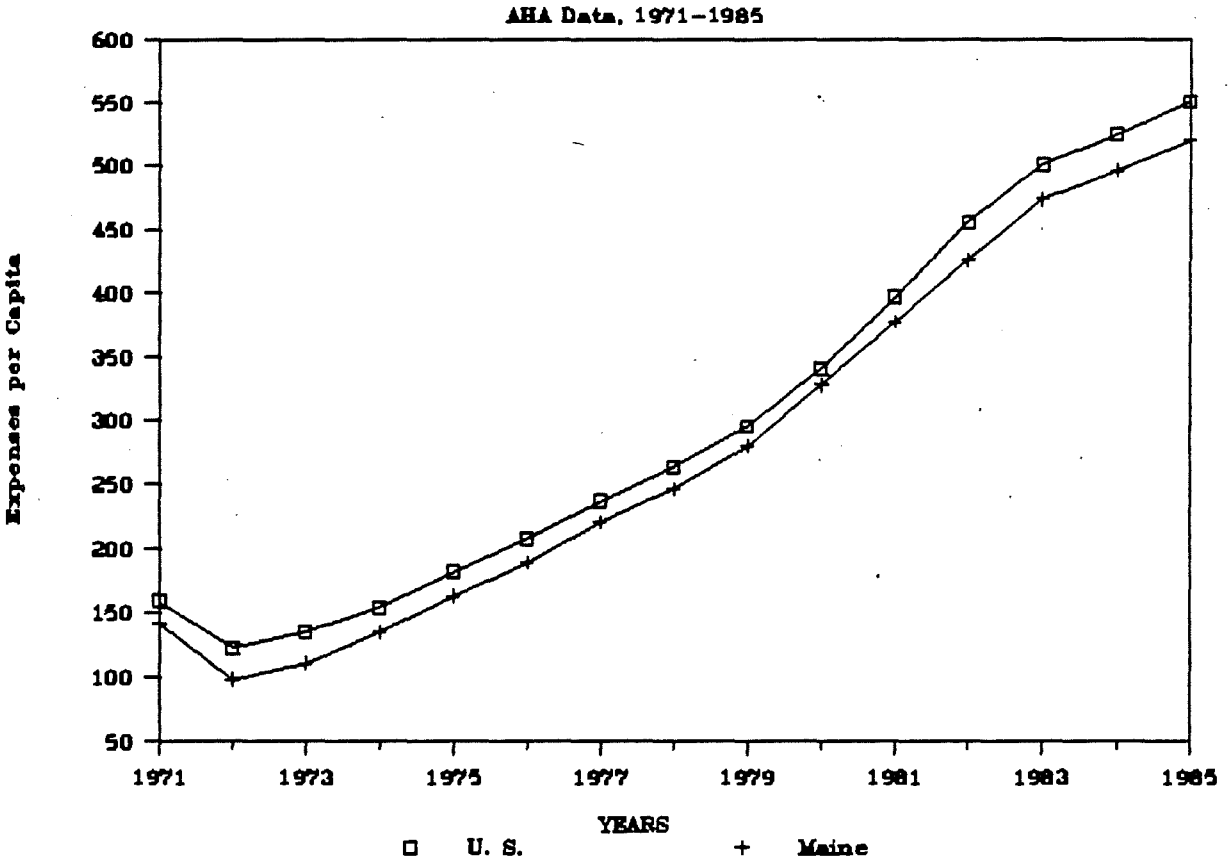


Graph 9 shows nationally an increasing use of hospital admissions for surgery. Maine's rate has also increased as an overall trend, surpassing the national rate in 1982, but since then seems to be tending toward the U.S. rate.

* * * * *

Financial Data. A financial measure that is especially useful in considering potential changes in regulatory policy for hospitals is hospital expenses. It measures the total level of expenses (i.e., costs to the payers as a whole), and can be considered on a per capita basis, a per admission basis, and a per day basis. The trends in expenses in Maine and the United States are as follows.

GRAPH 10: Hospital Expenses Per Capita



Expenses per capita continue to rise in Maine and U.S., at about the same rate. Thus the total hospital system continues to grow more expensive, with Maine's expenses continuing to be slightly below the national level.

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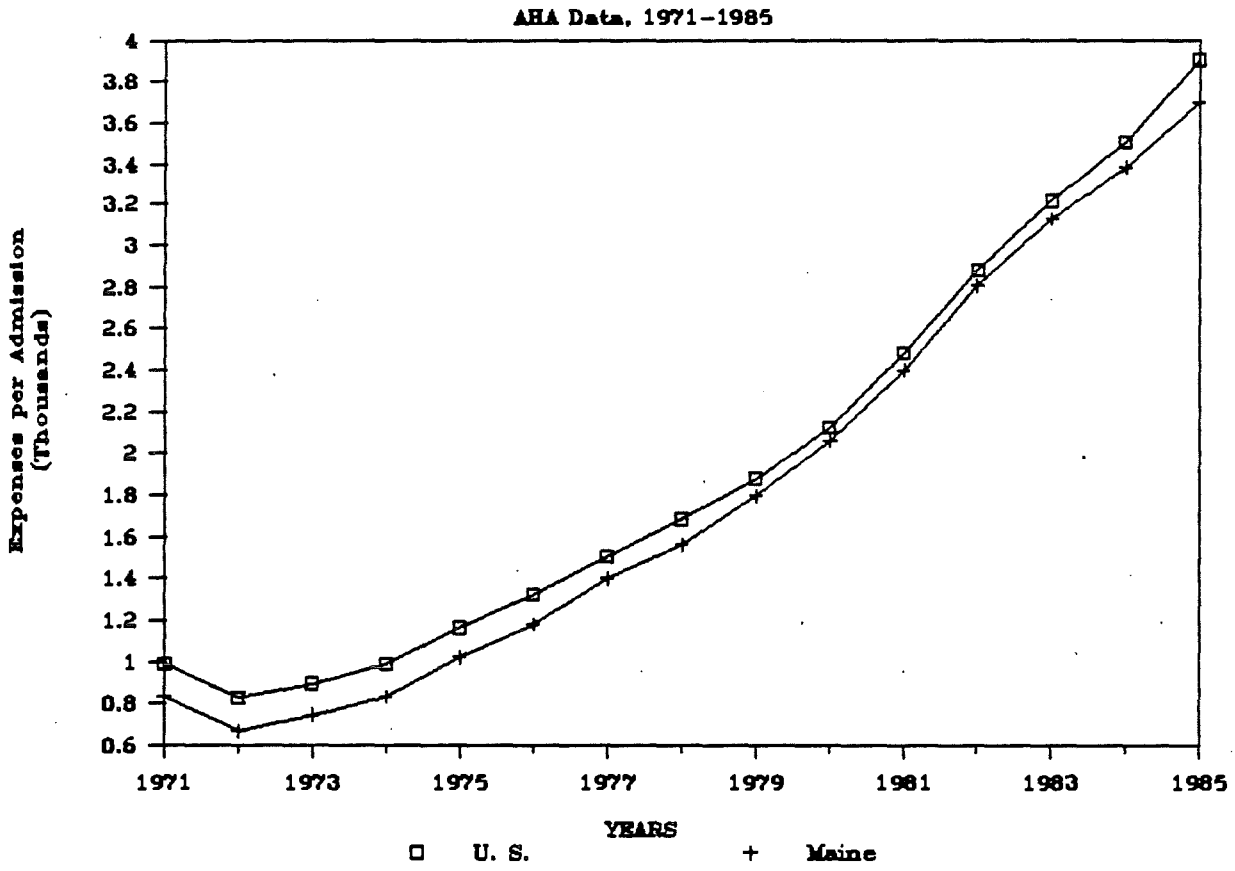
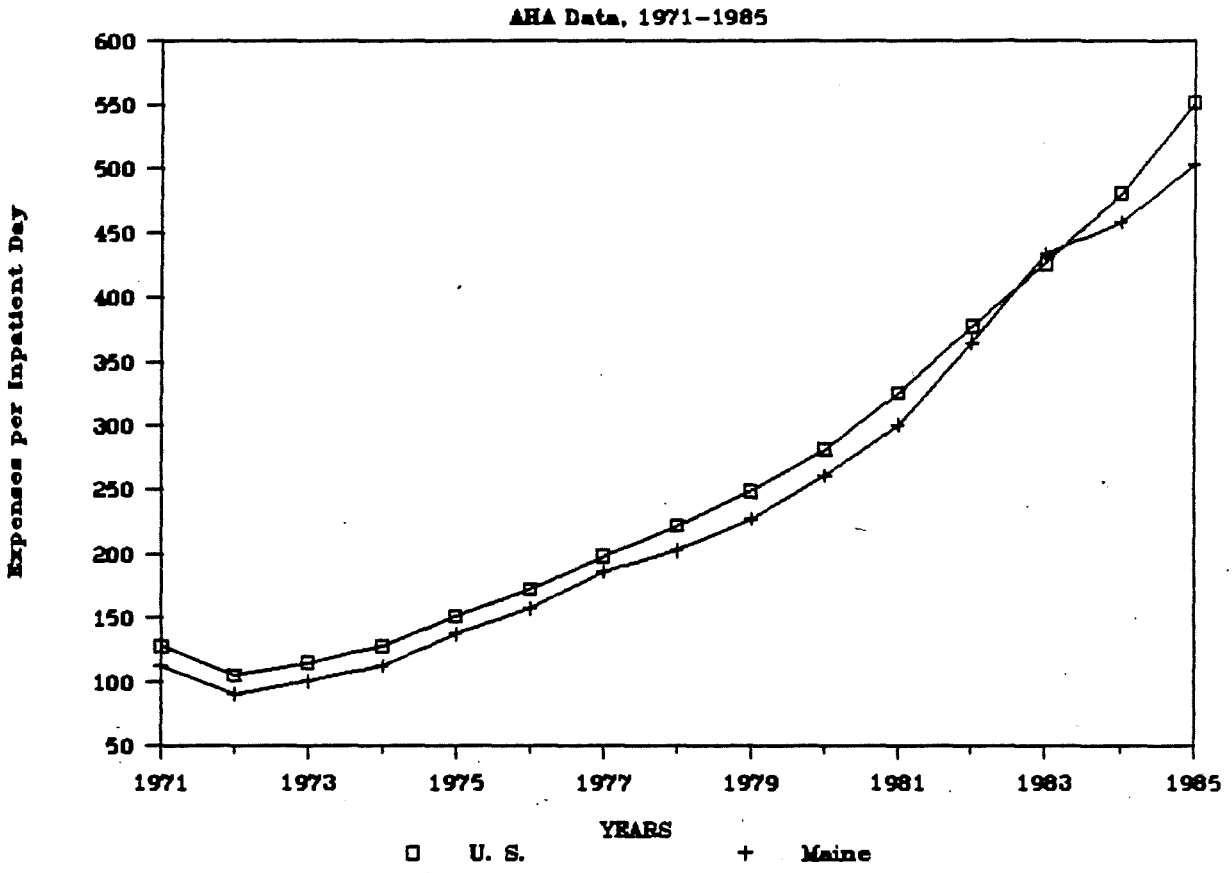
GRAPH 11: Hospital Expenses Per Admission



On a per admission basis, Maine is again below the U.S., but both continue to rise. Maine's rate of growth since 1982 is slightly less than the national rate (seen in the flatter slope of the line).

* * * * *

GRAPH 12: Hospital Expenses Per Day

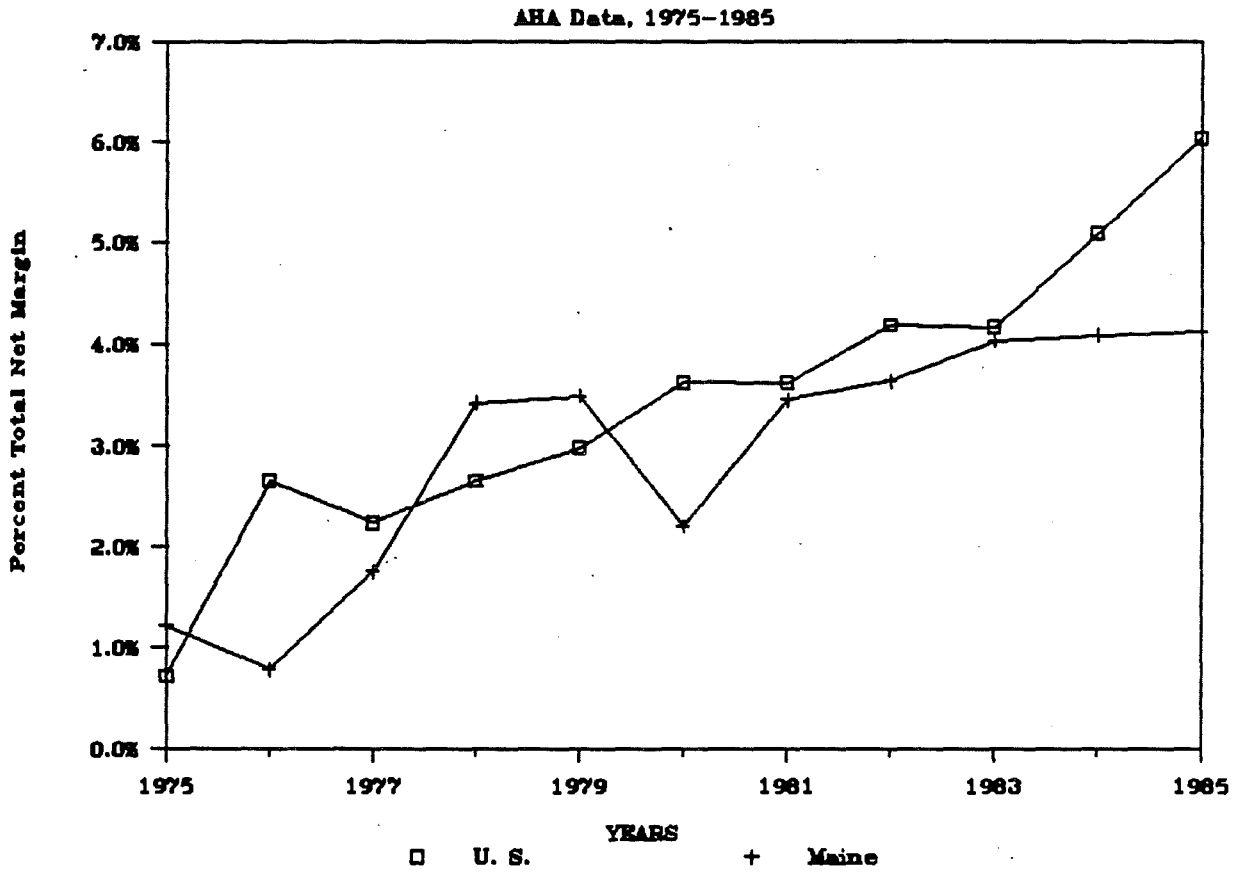


Expenses per day of stay have also risen nationally and in Maine, but Maine's rate of growth has tapered off noticeably since 1983. The significance of the latter is not clear, especially in light of Maine's trend to reduced average length of stay (ALOS) since 1981 (see Graph 5 above), because the later days of a hospital stay are normally less expensive, due to less intensive care, less testing and other factors. Yet it is these less expensive days that are eliminated when average length of stay is reduced. On the other hand, if the upswing in Maine's average length of stay (Graph 5) in 1984 and 1985 is significant, the lesser increase in expenses per day than nationally is somewhat puzzling, since the more expensive early days of stay are averaged out over more days.

* * * * *

Total net margin, as a percentage, is the ratio of total expenses to net total patient revenues. It is a measure of financial viability that indicates the hospitals' potential for future development and expansion.

GRAPH 13: Hospital Total Net Margin



From around one percent total net margin in 1975, hospitals in Maine and nationally show an upward trend to around 4.25 percent in 1983. In the period from 1983 to 1985, margins in Maine remained level, while margins nationally rose by almost two percentage points.[3]

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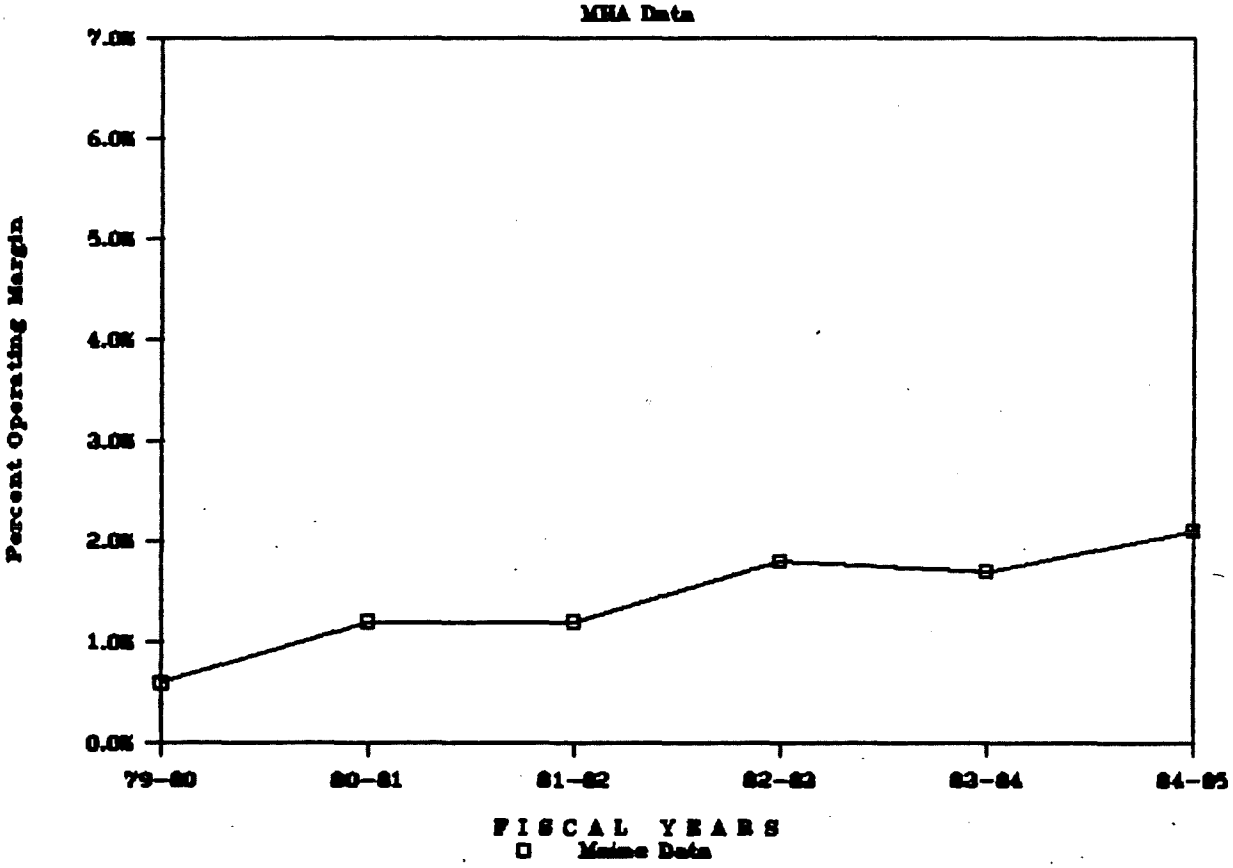
3 The AHA data used in Graph 13 is not directly comparable with MHCFC data in Tables 10,11,11-A. MHCFC reports lower margins on the average.

GRAPH 14: Maine Hospitals' Net Operating Margins



Data on operating margin from the Maine Hospital Association[4] show an upward trend from 1979-80 through 1984-85, with only a slight dip in 1983-84 (see Appendix D). These are displayed in Graph 14. Unpublished data from MHA show a falling off in operating margin in 1985-86, the first payment year under rate setting.

There is, of course, great variation among individual hospitals. In Table 10, Maine's hospitals show 1984-1985 operating margins ranging from -10.9 percent (i.e., a loss) to +3.9 percent, averaging +0.8%, based on MCHFC data. Table 11 groups the same data to show differences by region and location of hospital in relation to other hospitals, and Table 11-A summarizes the data by region and location.

* * * * *

4 "Maine Hospitals' Financial Data Book: 1979-80 through 1984-85." Augusta: Maine Hospital Association.

TABLE 10. SELECTED MAINE HOSPITAL DATA

HOSPITAL NAME	LOCATION	1ST PAYMENT YEAR BEGINS:	ACUTE BEDS 1985	OCCUPANCY 1985	CENSUS 1985	AVG. EXPENSES BASE AND TRANSITION YEARS	OPERATING MARGIN % BASE AND TRANSITION YEARS	TOTAL MARGIN % BASE AND TRANSITION YEARS	TOTAL ASSETS/BED HOSPITAL FY 1985	OUTPATIENT VOLUME AS A PERCENT OF TOTAL VOLUME FY 1985
AROOSTOOK	PRESQUE ISLE	1/1/85	225	70.7%	159	19,284,623	-1.8%	-1.1%	106,023	30.8%
BATH	BATH	10/1/84	59	39.0%	23	6,213,841	-1.6%	2.3%	113,653	38.2%
BLUE HILL	BLUE HILL	7/1/85	26	76.9%	20	5,120,037	-1.4%	6.0%	221,048	30.0%
CALAIS	CALAIS	1/1/85	77	27.3%	21	6,064,008	-0.7%	-0.2%	50,833	30.4%
CARY	CARIBOU	1/1/85	65	73.8%	48	10,052,279	2.1%	3.9%	176,060	29.5%
CASTINE	CASTINE	2/1/85	12	25.0%	3	714,244	-10.9%	-1.9%	37,382	27.6%
CMMC	LEWISTON	7/1/85	250	64.0%	160	31,823,137	2.7%	4.0%	106,824	24.9%
C.A. DEAN	WATERVILLE	4/1/85	See Mid-Maine Medical Ctr.			834,906	-9.5%	0.0%		45.7%
DOWN EAST	MACHIAS	1/1/85	38	68.4%	26	4,009,104	1.3%	3.1%	73,042	25.4%
EMMC	BANGOR	9/30/84	409	78.5%	321	66,145,458	0.6%	2.4%	144,436	23.7%
FRANKLIN	FARMINGTON	7/1/85	70	65.7%	46	9,960,015	1.2%	3.0%	191,490	23.8%
GOODALL	SANFORD	6/1/85	175	85.1%	149	11,175,392	3.1%	6.8%	74,233	27.1%
HOULTON	HOULTON	10/1/84	89	58.6%	52	7,690,393	0.7%	1.2%	134,886	23.1%
JACKSON BROOK	PORTLAND	7/1/85	(96)							
KVMC	AUGUSTA	7/1/85	204	65.2%	133	23,759,123	3.0%	4.1%	125,031	23.7%
MAINE COAST	ELLSWORTH	7/1/85	64	50.0%	32	6,259,315	1.3%	3.1%	71,030	20.6%
MAINE MED	PORTLAND	10/1/84	556	89.0%	495	97,750,229	1.8%	2.8%	280,478	17.0%
MAYO	DOVER-FOXCROFT	10/1/84	52	65.4%	34	5,941,868	0.8%	2.2%	144,132	21.0%
MERCY	PORTLAND	7/1/85	200	83.0%	166	27,344,066	1.9%	0.6%	173,072	18.5%
MID-MAINE	WATERVILLE	4/1/85	330	74.5%	246	38,234,017	1.0%	2.1%	140,880	23.2%
MILES	DAMARISCOTTA	5/1/85	68	80.9%	55	4,126,496	-0.8%	10.1%	102,211	27.6%
MILLINOCKET	MILLINOCKET	7/1/85	50	44.0%	22	6,171,147	0.9%	2.1%	97,985	42.6%
MT. DESERT	BAR HARBOR	5/1/85	66	45.5%	30	4,537,320	-4.5%	1.3%	51,142	18.1%
NMMC	FORT KENT	10/1/84	70	35.7%	25	4,924,274	-2.5%	-1.7%	55,219	26.7%
NO. CUMBERLAND	BRIDGTON	11/1/84	40	72.5%	29	5,461,348	-1.1%	0.6%	120,539	23.5%
OHM	PORTLAND	9/1/85	160	68.8%	110	21,585,440	3.1%	5.0%	131,042	19.2%
PARKVIEW	BRUNSWICK	7/1/85	55	60.0%	33	6,530,819	1.5%	2.0%	96,138	22.2%
PEN BAY	ROCKPORT	4/1/85	150	84.0%	126	16,866,308	-1.4%	0.8%	118,790	22.0%
PEN VALLEY	LINCOLN	1/1/85	44	47.7%	21	4,403,406	-3.5%	-3.0%	98,999	36.3%
RED-FAIRVIEW	SKOWHEGAN	7/1/85	92	45.7%	42	8,129,566	1.0%	5.8%	84,659	28.2%
REGIONAL	BRUNSWICK	10/1/84	98	59.2%	58	8,217,772	0.9%	2.5%	111,152	21.7%
RUMFORD	RUMFORD	7/1/85	97	41.2%	40	7,730,936	2.9%	4.7%	59,747	22.9%
SEBASTICOOK	PITTSFIELD	12/1/84	36	36.1%	13	2,753,996	1.4%	-0.8%	43,316	33.3%
SMMC	BIDDEFORD	5/1/85	150	74.7%	112	19,122,584	1.5%	4.5%	152,227	20.4%
STEPHENS	NORWAY	1/1/85	50	74.0%	37	6,944,670	1.5%	3.0%	133,181	26.4%
ST. ANDREWS	BOOTBAY HARBOR	10/1/84	32	37.5%	12	1,872,802	-0.5%	6.2%	71,957	20.2%
ST. JOSEPH	BANGOR	1/1/85	130	39.2%	51	14,614,184	-1.2%	-0.5%	70,013	34.1%
ST. MARY'S	LEWISTON	1/1/85	233	57.9%	135	24,521,607	1.1%	1.4%	58,166	27.7%
TAYLOR OSTEO.	BANGOR	10/1/84	98	51.0%	50	4,135,441	-2.8%	-1.6%	18,894	26.5%
VAN BUREN	VAN BUREN	1/1/85	29	17.2%	5	1,429,252	0.1%	1.1%	36,548	36.8%
WALDO	BELFAST	7/1/85	49	53.1%	26	5,253,796	3.0%	8.1%	209,383	22.1%
WATERVILLE OSTEO.	WATERVILLE	1/1/85	78	67.9%	53	8,197,937	3.9%	4.3%	83,492	17.6%
WESTBROOK	WESTBROOK	1/1/85	30	40.0%	12	1,460,709	.0%	0.6%	40,661	29.1%
YORK	YORK	7/1/85	86	68.6%	59	8,589,935	0.8%	5.0%	152,607	22.9%
STATE OF MAINE			4,092	67.3%	3,290	575,965,875	0.8%	2.9%	110,987	23.8%

Totals do not include Jackson Brook.

Source: Health Care Finance Commission

TABLE 11. SELECTED MAIN HOSPITAL DATA, GROUPED

AREA	HOSPITAL NAME	LOCATION	1ST PAYMENT YEAR BEGINS:	ACUTE BEDS 1985	OCCUPANCY 1985	CENSUS 1985	AVG. EXPENSES BASE AND TRANSITION YEARS	OPERATING MARGIN % BASE AND TRANSITION YEARS	TOTAL MARGIN % BASE AND TRANSITION YEARS	TOTAL ASSETS/BED HOSPITAL FY 1985	OUTPATIENT VOLUME AS A PERCENT OF TOTAL VOLUME FY 1985
PORTLAND AREA				946	82.8%	783	148,140,529	1.9%	2.8%	224,656	17.6%
	MERCY	PORTLAND	7/1/85	200	83.0%	166	27,344,066	1.9%	0.6%	173,072	18.5%
	OHM	PORTLAND	9/1/85	160	68.8%	110	21,585,440	3.1%	5.0%	131,042	19.2%
	MAINE MED	PORTLAND	10/1/84	556	89.0%	495	97,750,229	1.8%	2.8%	280,478	17.0%
	WESTBROOK	WESTBROOK	1/1/85	30	40.0%	12	1,460,789	.0%	0.6%	40,661	29.1%
OTHER SOUTHERN MAINE				411	77.9%	320	38,887,910	1.9%	5.3%	119,098	22.8%
	SMMC	BIDDEFORD	5/1/85	150	74.7%	112	19,122,584	1.5%	4.5%	152,227	20.4%
	GOODALL	SANFORD	6/1/85	175	85.1%	149	11,175,392	3.1%	6.8%	74,239	27.1%
	YORK	YORK	7/1/85	86	68.6%	59	8,589,935	0.8%	5.0%	152,607	22.9%
OTHER URBAN AREAS				1,944	65.0%	1,263	233,236,238	1.2%	2.5%	78,944	23.3%
	KVMC	AUGUSTA	7/1/85	204	65.2%	133	23,759,123	3.0%	4.1%	125,031	23.7%
	EMMC	BANGOR	9/30/84	409	78.5%	321	66,145,458	0.6%	2.4%	144,436	23.7%
	ST. JOSEPH	BANGOR	1/1/85	130	39.2%	51	14,614,184	-1.2%	-0.5%	70,813	34.1%
	TAYLOR OSTEO.	BANGOR	10/1/84	98	51.0%	50	4,135,441	-2.8%	-1.6%	18,894	26.5%
	BATH	BATH	10/1/84	59	39.0%	23	6,213,841	-1.6%	2.3%	113,653	38.2%
	REGIONAL	BRUNSWICK	10/1/84	98	59.2%	58	8,217,772	0.9%	2.5%	111,152	21.7%
	PARKVIEW	BRUNSWICK	7/1/85	55	60.0%	33	6,538,819	1.5%	2.0%	96,138	22.2%
	CMMC	LEWISTON	7/1/85	250	64.0%	160	31,823,137	2.7%	4.0%	106,824	24.9%
	ST. MARY'S	LEWISTON	1/1/85	239	57.9%	135	24,521,607	1.1%	1.4%	58,166	27.7%
	WATERVILLE OSTEO.	WATERVILLE	1/1/85	78	67.9%	53	8,197,937	3.9%	4.3%	83,492	17.6%
	MID-MAINE	WATERVILLE	4/1/85	330	74.5%	246	38,234,017	1.0%	2.1%	140,880	23.2%
	C.A. DEAN	WATERVILLE	4/1/85	See Mid-Maine Medical Ctr.			834,906	-9.5%	0.0%		45.7%
OTHER HOSPITALS				1,591	58.1%	924	155,701,205	.0%	2.3%	105,057	26.6%
	MT. DESERT	BAR HARBOR	5/1/85	66	45.5%	30	4,537,328	-4.5%	1.3%	51,142	18.1%
	WALDO	BELFAST	7/1/85	49	53.1%	26	5,253,796	3.0%	8.1%	209,383	22.1%
	BLUE HILL	BLUE HILL	7/1/85	26	76.9%	20	5,120,037	-1.4%	6.0%	221,048	30.0%
	ST. ANDREWS	BOOTBAY HARBOR	10/1/84	32	37.5%	12	1,872,802	-0.5%	6.2%	71,957	20.2%
	NO. CUMBERLAND	BRIDGTON	11/1/84	40	72.5%	29	5,461,348	-1.1%	0.6%	120,539	23.5%
	CALAIS	CALAIS	1/1/85	77	27.3%	21	6,064,008	-0.7%	-0.2%	50,833	30.4%
	CARY	CARIBOU	1/1/85	65	73.8%	48	10,052,279	2.1%	3.9%	176,060	29.5%
	CASTINE	CASTINE	2/1/85	12	25.0%	3	714,244	-10.9%	-1.9%	37,382	27.6%
	MILES	DAMARISCOTTA	5/1/85	68	80.9%	55	4,126,496	-0.8%	10.1%	102,211	27.6%
	MAYO	DOVER-FOXCROFT	10/1/84	52	65.4%	34	5,941,868	0.8%	2.2%	144,132	21.0%
	MAINE COAST	ELLSWORTH	7/1/85	64	50.0%	32	6,259,315	1.3%	3.1%	71,030	28.6%
	FRANKLIN	FARMINGTON	7/1/85	70	65.7%	46	9,960,015	1.2%	3.0%	191,490	23.8%
	NMMC	FORT KENT	10/1/84	70	35.7%	25	4,924,274	-2.5%	-1.7%	55,219	26.7%
	HOULTON	HOULTON	10/1/84	89	58.6%	52	7,690,393	0.7%	1.2%	134,886	23.1%
	PEN VALLEY	LINCOLN	1/1/85	44	47.7%	21	4,403,406	-3.5%	-3.0%	98,999	36.3%
	DOWN EAST	MACHIAS	1/1/85	38	68.4%	26	4,009,104	1.3%	3.1%	73,042	25.4%
	MILLINOCKET	MILLINOCKET	7/1/85	50	44.0%	22	6,171,147	0.9%	2.1%	97,985	42.6%
	STEPHENS	NORWAY	1/1/85	50	74.0%	37	6,944,670	1.5%	3.0%	133,181	26.4%
	SEBASTICOOK	PITTSFIELD	12/1/84	36	36.1%	13	2,753,996	1.4%	-0.8%	43,316	33.3%
	ARDOSTOOK	PRESQUE ISLE	1/1/85	225	70.7%	159	19,284,623	-1.8%	-1.1%	106,023	30.8%
	PEN BAY	ROCKPORT	4/1/85	150	84.0%	126	16,866,308	-1.4%	0.8%	118,790	22.0%
	RUMFORD	RUMFORD	7/1/85	97	41.2%	40	7,730,936	2.9%	4.7%	59,747	22.9%
	REO-FAIRVIEW	SKOWHEGAN	7/1/85	92	45.7%	42	8,129,566	1.0%	5.8%	84,659	28.2%
	VAN BUREN	VAN BUREN	1/1/85	29	17.2%	5	1,429,252	0.1%	1.1%	36,548	36.8%
	JACKSON BROOK		7/1/85								
STATE OF MAINE				4,892	67.3%	3,290	575,965,875	0.8%	2.9%	118,987	23.8%

TABLE 11-A. SUMMARY OF TABLE 11

	Acute Care Beds 1985	Occ. Rate 1985 %	Operating Margin Base And Trans. Years (1984-85)	Total Margin Base And Trans. Years (1984-85)	Total Assets/Bed, Hospital FY 1985 (000)	Outpatient Volume As % Total Volume FY 1985	Hospitals No.	Hospitals %	Beds (%)
PORTLAND AREA	946	82.8	1.9	2.8	224.7	17.6	4	9.3	19.3
OTHER SOUTHERN MAINE	411	77.9	1.9	5.3	119.1	22.8	3	6.9	8.4
OTHER URBAN AREAS	1,944	65.0	1.2	2.5	78.9	23.3	12	27.9	39.7
OTHER HOSPITALS	1,591	58.1	0.0	2.3	105.1	26.6	24	55.8	32.5
STATE OF MAINE	4,892	67.3	0.8	2.9	119.0	23.8	43	100.0	100.0
UNITED STATES 1984		69.0		5.4		14.3			
1985		64.8		6.4		16.1			

Source: Maine data from Table 10; figures do not include the Jackson Brook Institute; U.S. data from AHA Guide, 1985 and 1986.

Average age of plant is an indicator of the financial condition of hospitals in that hospitals that are prospering are better able financially to modernize and renovate. Their average age of plant will usually be less than hospitals that are less well off financially.

While comparable national data are not available, Table 12 below, drawn from the Maine Hospital Association publication cited above, show that Maine's hospitals, on the whole, have improved their financial positions over time, as shown by decreasing average age of plant. The breakdown by size, however, shows the large hospitals to be largely responsible for the overall trend. Small hospitals showed a reverse trend, toward increased average age of plant; they have come up to the average plant age, 6.9 years, that the large hospitals have come down to.

TABLE 12

Maine Hospitals' Average Age of Plant
(Accounting Age in Years)

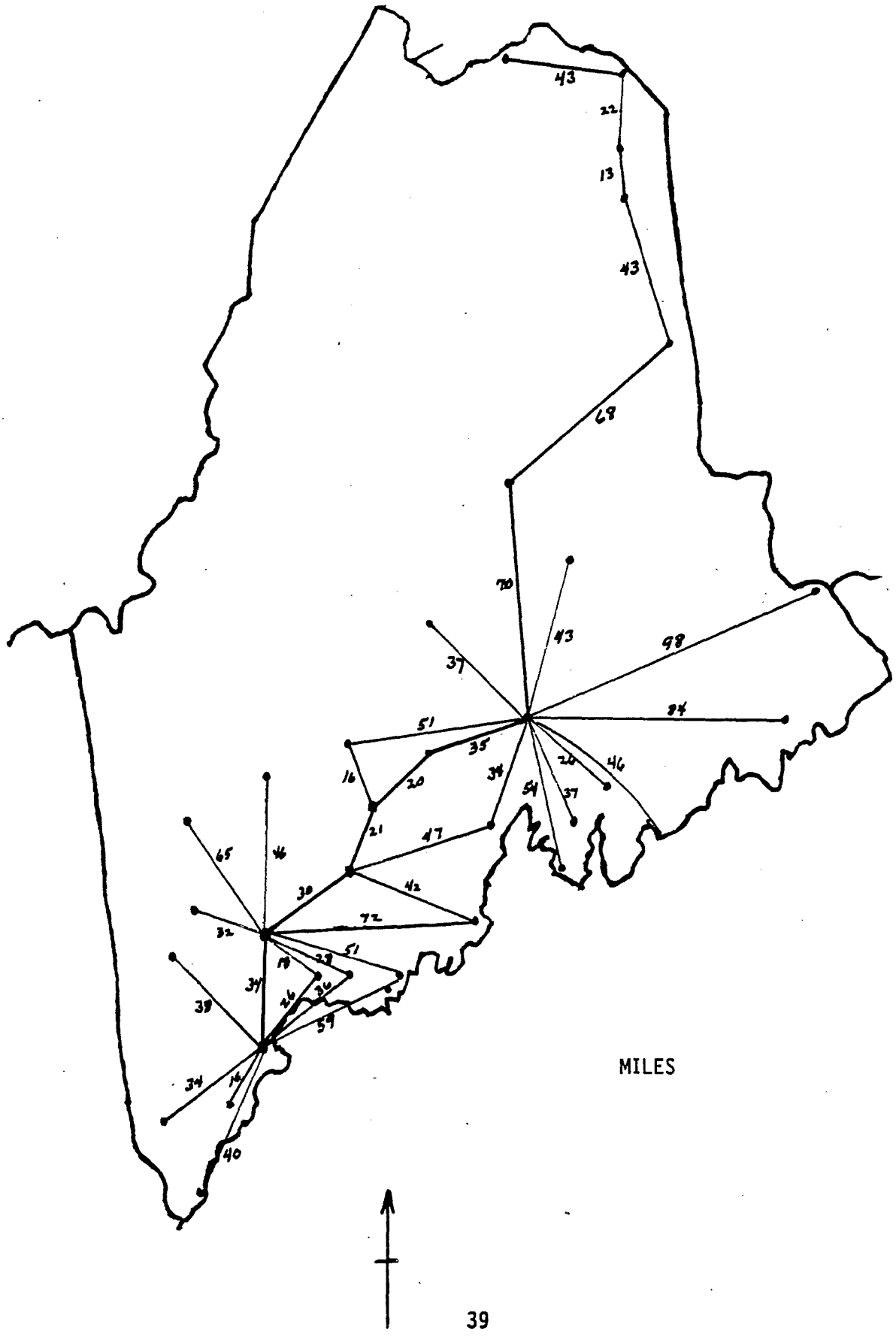
	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Maine Total	7.4	7.9	7.7	.6	7.1	7.0
Large (111+ beds)	8.1	8.2	8.1	7.8	7.0	6.9
Medium(56-110 beds)	6.7	7.9	7.4	7.8	7.4	7.3
Small (1-55 beds)	5.8	6.2	6.1	6.2	6.8	6.9

Location. While not a force, at least in the short run, the location of facilities in relation to population is important in an overview of the health care system. Map 1 shows the cities and towns in which Maine's hospitals are located. The cities and towns are connected by straight lines showing the road distances in miles between them. (Travel times in good weather can be estimated using the federal standard of 1.5 minutes per mile.) In general, Maine has many small hospitals, separated from one another.

Map 2 shows the same cities, with the number of acute care beds, by hospital, indicated by each city. Four urban areas are multi-hospital areas.

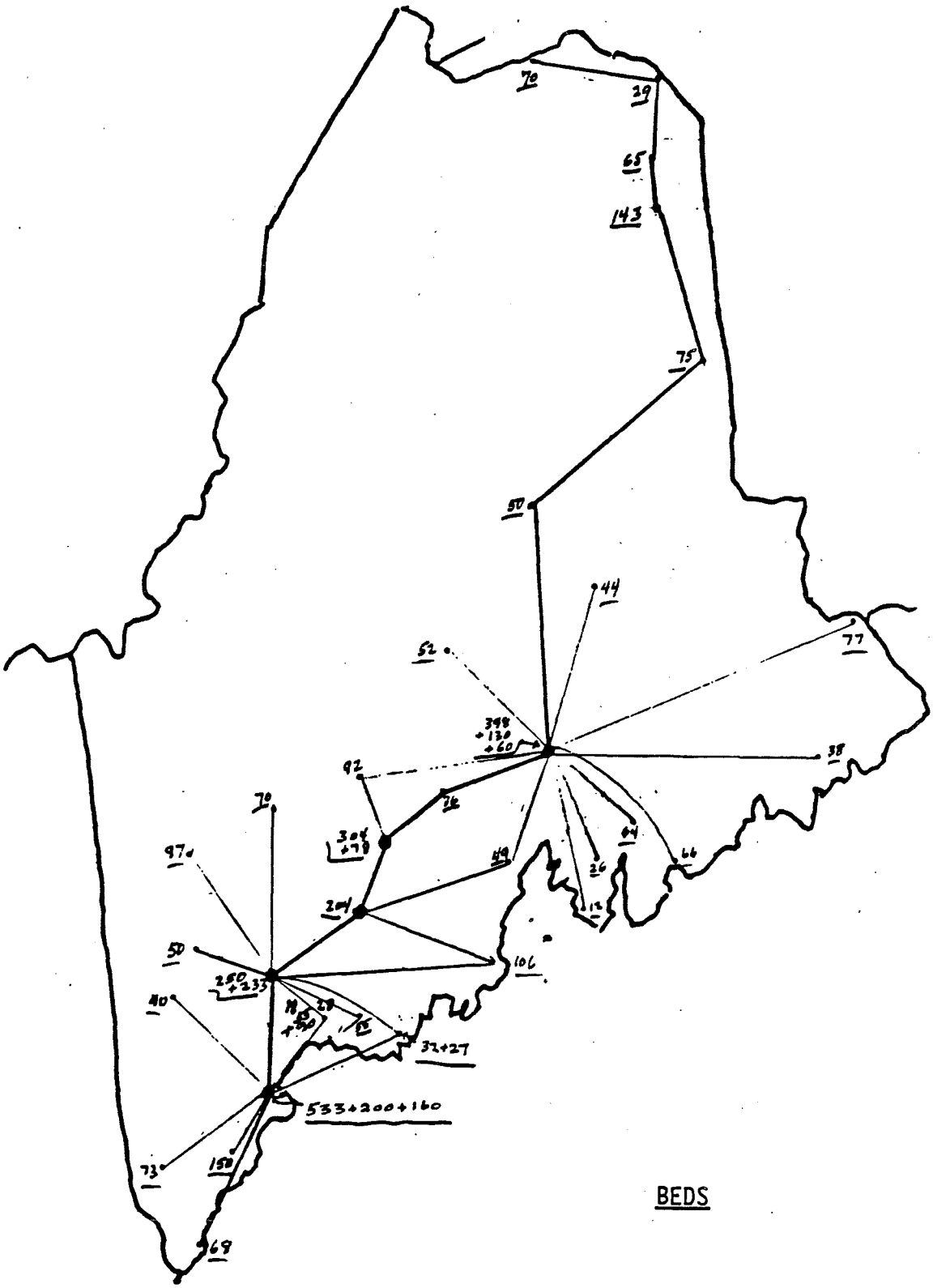
MAP 1

Distances Between Maine Hospital Towns



MAP 2

Maine Hospitals by Bed Size and Towns



Comparing the Maine Hospital Environment to the U.S. Environment. The rankings for hospitals in Appendix C, Table 3, on capacity, utilization and costs in comparison with other states, are summarized in Table 13 below.

TABLE 13
Maine Hospital Rankings

Among the Fifty States in 1980 and 1985, Maine Hospitals Ranked:

	1980	1985
• In beds per 1,000 population	21	27
• In admissions per 1,000 population	26	23
• In average length of stay	17	17
• In inpatient days per 1,000 population	20	21
• In occupancy rates (percent)	19	13
• In expenses per capita	19	21
• In expenses per admission	19	20
• In operating margin	44	44

Maine ranked high on bed supply in 1980, but is now in the middle. Admissions are also about in the middle. Ranks for average length of stay and expenses continue high. Maine's rank in occupancy rate has risen, as other states' occupancy rates have fallen even more steeply than Maine's (compare Graph 7, page 23). Operating margin continues to rank low among the states.

Forces and Factors Facing Hospitals

The broad forces and factors affecting hospitals in Maine and the United States are compared in Table 14 below.

TABLE 14

Forces and Factors Facing Hospitals

U.S.	Maine
1. Rise in cost of inputs	1. Similar to national
2. Population growing slowly, percentage over 65 years old increasing	2. Maine population is also increasing slowly, and its elderly population as it increases, continues to be above the national percentage.
3. Rapid growth in alternative providers (urgent care centers, clinics)	3. Slow growth, with growth particularly in southern Maine
4. Federal, state and private financing increasingly restrictive -- Indigent care -- Medical education -- Increasing co-payments	4. State hospital rate-setting program covers all payers, including Medicaid de facto. Its intent is both to restrain costs and to meet full financial requirements of hospitals. Too early to judge impact.
5. Uncertain future of capital financing and access to capital	5. Less uncertainty in access to capital due to MHCFC guarantees
6. Pressure to reduce utilization -- PROs -- PPS Incentives -- Alternative Delivery Systems	6. Similar to U.S. in direction, although perhaps less intense due to MHCFC guarantees. Alternative delivery systems spokespersons predict their increase, especially in urban areas.

Hospital Reimbursement Differences

Maine's hospital reimbursement system differs considerably from that of most other states. The key differences by type of payer are summarized in Table 15 on the following page.

Maine's hospital rate-setting program, administered by MHCFC, thus substantially changes the reimbursement environment from that typically faced nationally. Hospitals are faced with a set of financial incentives, based on a system that trends historical budgets forward, that do not vary by payment source.

TABLE 15
Reimbursement Differences Faced by Maine Hospitals

U.S.	Maine
1. Medicare PPS	1. Under MHCFC:
-- Medicare only	-- Medicare is in effect included in with other payers, as Medicare revenues are included when total hospital revenues are set. This may allow subsidy of Medicare by other payers.
-- Payment basis: per case-type	-- Meets full financial requirements of hospitals by setting total revenues
-- Moves toward national average prices	-- Recognizes individual hospital variation
-- Medical education of direct cost plus indirect cost allowance	-- Included in the hospital's full financial requirements
-- Capital costs currently passed through, but change to prospective payment under debate	-- Passed through subject to statewide capital cap (hospital development account) with portion reserved for individual hospitals
-- Indigent care: no provision	-- Included in the hospital's full financial requirements
2. Medicaid: Diversity of approaches and incentives	2. Included in MHCFC: Same incentives as above
-- Like PPS (e.g., Ohio)	
-- Selective contracting (e.g., California)	
-- Alternative delivery systems/ capitation (Wisconsin)	
-- Per diem with cost limits	
3. Other Payers: Greater Diversity	3. Included in MHCFC: Same incentives as above

III. ACUTE CARE AND AMBULATORY CARE IN MAINE

In this chapter, we assess the acute care and ambulatory care sector of Maine's health care system. We consider these two sectors of the health care industry together because of their significant overlapping. Freestanding centers provide services on an outpatient basis that overlap or compete with services that historically have been provided by hospitals; some hospitals are considering offering services that have heretofore been offered by physicians or by freestanding entities. For example, MRIs (magnetic resonance imaging units) thus far in Maine are in freestanding centers. Some other states have tried to limit them to major medical centers. In both cases there are some potential MRI providers who are regulated and some who are not. In Maine, hospitals are regulated by CON and the rate-setting program and some, but not all, freestanding centers are regulated by CON. As a result, hospital representatives have called for a "level playing field" with their non-hospital competitors. Public policy decisions on the future of CON in Maine should take account of the increasing interaction between these two sectors.

Our analysis of these two sectors is based upon Maine's perceived goals for the future of health care systems, as indicated in legislation, in the 1985 State Health Plan for Maine and in other policy documents, and in our interviews with state officials and representatives of the industry.

In considering whether or not to continue CON, and whether or not to modify it, Maine does not begin with a blank slate. The CON program has been in operation since 1978. The review of major capital expenditures by health facilities has taken place for an even longer period, since 1973 under the federal section 1122 program. The comprehensive hospital rate-setting program has been in effect for a short time, only since 1984, but this program, with its hospital development account can play a major role in influencing the level of capital investment in the future. (See Appendix E for a summary description of this program.) The rationales for both CON and rate setting have been questioned by a number of providers, primarily

hospitals. The Legislature will consider this year whether to retain hospital rate setting or abolish it, and if it is retained, whether some adjustments should be made to the program. It may also consider whether to retain CON and whether changes in it are desirable.

This study of Maine's planning and CON programs did not include as part of its mandate an assessment of the rate setting program. In making recommendations for changes in planning and CON, it was necessary to consider these changes in light of whether Maine continues its rate setting program or not, and assess their implications in either case.

Despite some individual efforts to repeal CON, the Legislature in recent years appears to share the following two interests with the Executive Branch:

- A strong presumption for the states' goals of cost containment, improvement of access to care, and maintenance and improvement of quality of care, with health planning being an important tool to achieve these goals, and CON one of the tools for the implementation of planning, and

- a recognition of the need to make adjustments in the focus, scope and operation of CON to better achieve the agreed upon goals.

These three policy goals for the health care system -- cost, access, and quality -- were also reflected in the policy documents that we reviewed and the interviews with state officials and industry representatives. Since Maine accepts these broad goals for its health care system, we have used them as a framework for structuring our analysis.

Costs of Acute Care in Maine

Between 1980 and 1985, there were major changes in hospital use in Maine. Inpatient use declined substantially, total admissions falling from 177,937 to 162,818 and inpatient days from 1,403,558 to 1,193,316 (See

Appendix C, Table 1). Outpatient use increased, but adjusted patient days, which take account of outpatient volume, still showed a decline, from 1,693,134 to 1,548,628 (AHA Guide).

During the same period, expenses, revenues, and margins all rose. Total expenses rose from $336.58 million to $601.41 million, net total revenues rose from $374.84 million to $627.27 million, and total net margins from 2.25 percent to 4.30 percent (all from Tables 1 and 2 in Appendix C; total net margins are displayed in Graph 13). The expense and revenue increases were 64.1 percent and 67.3 percent during a period when the medical care component of the consumer price index rose only 50.4 percent (from U.S. Bureau of Labor Statistics data). The Maine hospital net operating margins for the same period, shown in Graph 14, while small, also steadily increased.

The implication of the above is that during this period of declining use, hospitals were able to use their revenues and margins to maintain capacity. While hospitals have tried to respond to a changing market by expanding the range of outpatient services, they have had a high degree of immunity from the financial implications of the decline in their core inpatient business. Some of those we interviewed said that the changed market was subject to greater payer influence. James V. DiVirgilio, speaking for Blue Cross and Blue Shield of Maine, in testimony before the Maine Health Care Finance Commission on July 24, 1986, referred to a "shift of control in the health care industry from providers to purchasers (employers and individuals)". However, to date based on the information available, purchaser influence has been on utilization; market discipline on price is not evidenced. The role of rate setting in providing discipline cannot be determined yet.

The opportunity for direct competition between hospitals is also limited by the largely local nature of Maine's hospital markets (with exception of the referral hospitals in Portland, Maine Medical Center and Mercy Hospital). In an effort to assess whether sufficient economic or market discipline exists in Maine to warrant a reduction in regulatory

controls, especially capital expenditures control, we examined hospital competitiveness. As one important indicator of hospital competitiveness we examined data on market share. We chose York County, where, if anywhere, it would be anticipated that there might be a large overlap of service areas of hospitals located in different towns, and thus market shares apportioned among a number of hospitals.

Selected discharge data are shown in Table 16. In each of the towns of Biddeford, Sanford, and York, the local hospital has by far the largest market share, with the next largest shares going to the referral centers in Portland. (We did not analyze whether patients were drawn to these referral hospitals for the tertiary care services available or by competition for secondary care services.) Thus, we conclude that, at least locally, there is relatively little overlap of service areas and little direct competition.

TABLE 16
Percentages of Town Discharges
York County, 1985

	Town		
Hospital	Biddeford	Sanford	York
Southern Maine Medical Center	67.8	5.5	0.6
Goodall	0.6	70.4	-
York	0.1	0.5	88.2
Maine Medical Center	2.5	16.5	5.8
Osteopathic	1.8	4.2	2.3
Mercy	2.9	1.7	-
Central Maine Medical Center	0.0	-	1.6
Jackson Brook Institute	3.3	1.2	0.7
Westbrook	3.5	0.2	-

Source: "Maine Hospital Patient Origin Report, Calendar Year 1985," Maine Health Care Finance Commission, Division of Research and Data Management.

A potential exception is in the urban areas of Portland, Lewiston, Waterville and Bangor, where there are two to three hospitals each, and there may be competition in the urban market. This, however, is tempered by the unique role of Maine Medical Center as a tertiary referral center.

Maine's hospitals that are located in urban areas are facing increasing competition from freestanding facilities or physicians for a limited range of services -- diagnostic imagery, outpatient surgery, radiation therapy. While we were not able to analyze the extent of this competition, the anecdotal information received consistently reported an increase in this competition.

Some of those we interviewed were concerned about this increasing competition from non-hospital providers of ambulatory care because of the potentially limited access of uninsured patients to freestanding centers, as well as the erosion of a payment base for hospitals if paying patients are drawn away.

Hospitals perceive themselves as being at a competitive disadvantage because, due to the requirement of CON approval, they cannot establish facilities as quickly as non-hospital groups that are not subject to CON. Thus hospitals stand to lose initial market share.

Access to Acute Care

Maine has 157 physicians per 100,000 population, far less than the national average of 202 per 100,000. Within the state, nearly two-thirds of the physicians in 1982 were practicing in its four most populous counties, which together contained over fifty percent of the population. The physician population ratio varied greatly among counties. In Cumberland County, it was one physician for every 1,044 residents, while in Waldo County there was only one for each 2,595 residents. Of the 65 primary care analysis areas identified in the "1985 State Health Plan for Maine" (from which all of these figures are taken or derived), 23 were identified as primary care shortage areas as of 1985.

A number of strategies have been employed over the years to increase the numbers of physicians, especially in the shortage areas. Family practice residency programs have been established. Communities have subsidized clinics. Hospitals have established outlying extensions (licensed ambulatory care centers), which now number eleven.

These efforts to place and retain physicians in shortage areas also are important for access to hospital care. As Moscovice and Rosenblatt have noted,[5] "The rural physician and rural hospital need each other in order to survive. The physician uses the hospital as a second workshop to help improve the financial viability of his practice, as well as provide a setting in which he can use the skills he has acquired during his medical training. The hospital depends on local physicians for an adequate number of admissions to allow it to remain fiscally viable." Despite a variety of efforts, many of Maine's rural people are located a considerable distance from acute care facilities, particularly in terms of travel time in winter weather.

In general, the lack of sufficient appropriate linkages between levels of care seems to be a problem. A number of our interview respondents cited the weakness of linkages between hospital care and long-term care or home health care. The examples they gave were drawn both from the individual patient - individual facility level, as well as from the level of planning for adequate amounts of related services in the places needed.

Quality of Care

In addition to cost of care and access to care, quality of care is also an important concern of the state's planning/regulatory system. Efforts to constrain cost increases should not compromise quality, and efforts to increase access to care should not dissipate resources to the detriment of quality. There is also a direct concern with quality of the system of care,

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5 Ira Moscovice and Roger Rosenblatt, "The Viability of the Rural Hospital: A Synthesis of Findings from Health Services Research." National Center for Health Services Research, October 1982.

one that can be useful in a limited number of CON reviews. For example, when a traditional hospital service is proposed to be offered by a freestanding facility, it may be appropriate for the CON reviewers to bring to bear medical advice on the need for and extent of back-up and referral arrangements that should be in place. For some specialized services, where a threshold volume of procedures has been shown to be required for quality care, planning and review criteria can be adopted to prevent anticipated low-volume services from opening. We found that CON review criteria for quality exist, in the State Health Plan, and are used in reaching review decisions for some specialized services, such as open heart surgery, but have not yet been adopted for other services for which standards have been developed in other states. Examples are magnetic resonance imaging, cardiac catherization, and lithotrypsy. Examples are provided in Appendix G.

Broad Conclusions as to the Need for Planning and CON for Acute and Ambulatory Care in Maine

Based on the systems of acute and ambulatory care as they exist in Maine, their trends, Maine's goals with respect to cost, access and quality, and the lack of market discipline or the prospect of it if hospital rate setting were terminated, there is need for a system of health planning and certificate of need to help achieve these goals. The existing planning/CON system needs change, and we recommend below some important changes in scope and procedures for CON review to give it greater focus and to make it more efficient and effective.

As noted above, the principal reason that states began enactment of CON for hospitals was to limit capital spending to that which was needed. In Maine, there was additional concern with providing quality health care and avoiding unnecessary duplication of health facilities and services. Our interviewees emphasized the need for a system for ensuring orderly development of the health care system. The principal reason for ending the CON program would be a conclusion that market forces and the reimbursement system were together appropriately disciplining investment.

As we saw above, looking at the data for 1985 and earlier, there was no evidence of such discipline, despite decreases in use.

On the other hand, the market and reimbursement have changed since 1985. Use of hospitals is continuing to decline. The hospitals are likely to make some shifts in investment to reflect these changes. Their goals may be to increase outpatients and to build those inpatient services that can attract patients, which would involve a fair degree of investment, which will be restrained. Several alternative delivery systems (health maintenance organizations or HMOs, preferred provider organizations or PPOs, and other arrangements) are being developed in southern Maine and the urban areas generally. Their potential effect is not yet known. It may be that they will be able to attract a sufficient share of physicians and patients that hospitals will seek their applications and referrals, and thus bring a measure of economic discipline to the hospital market.

The impact of MHCFC on these changes in hospital behavior is unclear, but its program includes limitation of capital spending and the administration of the limitation through CON. If rate setting should be eliminated in Maine, and if the role of alternative delivery systems does not develop as some predict, any constraint would have to come from the payers. The most effective constraint in non-rate-setting states has been Medicare's impact on operating costs through DRG-based reimbursement. We have largely anecdotal information, but it appears that rural hospitals have been disadvantaged, but some urban hospitals have done well under the new Medicare system.

In discussions at the national level on payment for capital under Medicare, the American Hospital Association, which originally supported the administration and Congressional leaders in seeking some form of prospective payment, now opposes it and calls for continuation of cost-based reimbursement. This effort may well prove successful and, if so, would eliminate any incentive for discipline in capital spending. Thus we cannot simply assume that Medicare reimbursement would be a source of constraint for these costs in the absence of rate-setting.

Without rate setting, the ability of Medicaid, Blue Cross and private payers to introduce prospective capital payment that could discipline investment is not known. Perhaps Medicaid could do so for itself. Although at this writing no bill has yet been formally introduced, we understand that one proposal to repeal rate setting would prohibit all payers but Medicaid from negotiating any rate below the hospital-established charge. Such a provision would reduce the potential for economic discipline on capital spending.

Given, therefore, the lack of evidence of past market discipline on costs in the years immediately before rate setting in Maine, uncertainty as to future discipline in the absence of MHCFC, uncertainty as to future Medicare capital payment methods, the role of CON in the limitation in capital spending, concern about orderly development of the health care system, and concern about access to care, we would recommend retaining CON in Maine as the prudent course. At the same time, the changing financing environment, efforts to refocus care on outpatients, declines in inpatient care in rural hospitals, changing technology and the changing role of small, rural hospitals in providing inpatient care, and the growth of outpatient alternatives, all suggest an opportunity to refocus and narrow CON review.

Maine would find it inconsistent with its goals as to cost, quality and access to eliminate altogether health planning and CON for acute care. We recommend that it retain the general system, but modify it as appropriate. Where regulations can be relaxed or eliminated, the increased flexibility may allow hospitals to contribute to the shared goals. Expanded regulation would be appropriate when it would further the goals, as for example with certain expensive equipment. Specific recommendations are provided in the sections below.

Access considerations also support continuation of planning and CON, although here the emphasis would be on planning for health care services. Based on an improved planning process, CON can be a useful implementation tool. Not only can some proposed projects be approved or disapproved with

greater efficiency when it is based on good planning, but CON provides leverage in negotiations so that access considerations will be taken into account as changes are made in the system.

Finally, planning and CON are appropriate means to help ensure quality for some services. Where the projected volumes of procedures in specialized services, or the availability of highly trained staff, are important for quality, CON review at the time the provider proposes to offer the service is the appropriate control for system quality. To rely only on later mortality and morbidity statistics would be to settle for lower quality than the current state of the art requires.

Considerations for Any Planning/CON System in Maine

We have argued that CON should be maintained, but that there is an opportunity to refocus its reviews. The scope of review can be narrowed, allowing the state to free up resources for broader planning, for example to deal with the problems of rural hospitals as they are affected by declining use and changing technology. Following are some considerations in redefining the CON program and the approach to review of acute and ambulatory care.

- Does discipline exist for the hospital?

  -- Currently there is a cap on capital expenditures. We recommend below that it be retained. Reductions in the types of expenditures covered by CON, recommended below, might require some shift in the Development Account from the percentage in the statewide portion to the individual hospital account.

  -- There is also said, by providers and by rate setters, to be frequent subsidization of outpatient services by inpatient services through the rate setting process. (This is also commonly done by the hospitals themselves in other states.)

There is less discipline where a subsidy exists. This is now offset by the discipline of CON review of hospital outpatient services, but this in turn frustrates hospitals when they perceive that it places them at a competitive disadvantage. For example, they need to go through the CON review process to acquire a CT scanner, where a group of physicians can simply make the purchase and gain an initial market share that is difficult to catch up with. A balance will need to be struck.

- Does discipline that exists allow deregulation from CON of specific services?

- Are there types of projects that are almost always approved with few modifications?

- Are there reasons to want to centralize, regionalize or otherwise limit some services to specific providers?

  -- For example, when there is a natural limit to a market, as in the case of lithotripsy.

  -- For example, when there are clear quality gains from limitation, as with open heart surgery.

- What are services that can be offered on an outpatient basis that have substantial impact on inpatient care?

  -- For each such service, in attempting to level the playing field, should regulation be extended or contracted, keeping in mind the goals of costs, access and quality.

- Do unique roles and regional circumstances, and the small size of some Maine hospitals require special types of planning activities?

Given these considerations, following are some broad recommendations for the CON program.

1. **Maintain the Limit or Cap on Annual Increases in Hospital Costs.**
To base CON reviews on "need", as Maine used to do and as most states still do, is to allow virtually unlimited cost increases. When, in addition, a state employs the criteria of economic feasibility for projects, as Maine does, this enables it to require in many cases that project costs be reduced, but does not allow it to say that the project cannot be afforded at any price, that it would add unnecessarily to total systems costs. Just as in state program budgeting, need (often translated into what we want or desire) should be constrained by the total amount that can be afforded. Maine's CON program now limits its approvals to the cap set by the statewide Hospital Development Account. A limitation on hospital cost increases is most readily maintained when the state has a rate setting program, as Rhode Island and Massachusetts have found and as seems likely to prove the case in Maine, but it is not necessary. In the absence of rate setting, a cap on cost increases could continue and the CON procedures would be no different, only the source of the cap amount itself would change. An executive official or the Legislature itself could determine the dollar figure.

2. **Cover Large Capital Expenditures.**
Maine now requires CON review of all capital expenditures of $350,000 or more. This is one of the lowest thresholds in the nation. (See Appendix F for a list of all state thresholds.) As indicated in Chapter II, the trend in recent years has been to raise capital expenditure thresholds. In Maine, the specifics of hospital rate setting, particularly the existence of the Hospital Development Account give hospitals an incentive to urge continuation of a low threshold, in order that more development activities may be fully reimbursed without having to be charged to the hospitals' individual development accounts. From the state's point of view, however, a great deal of staff effort now goes into reviewing relatively small projects whose approval or disapproval does not make a great deal of difference to the state in

achieving the broader goals that it seeks to achieve with planning/CON. While we are not able to obtain data on actual review staff time spent by size of project, Table 17 on the following page does show that in 1984-1986, 44.4 percent of the projects involved capital expenditures between $1,000 and $100,000. Another 18.3 percent had expenditures between $100,000 and $355,000, and 12.7 percent were between $355,000 and $732,000. If no projects of less than $732,000 had been reviewed, the state would still have reviewed most of the total dollars involved, but would have eliminated review of 75.4 percent of the number of projects. (Some of these projects could have been reviewed for reasons other than dollar size, so perhaps only half of the workload would have been eliminated.) Thus, focusing on the larger projects would have permitted greater attention to those more likely to affect the state's goals, or freed up staff for other work, or both.

If the capital expenditure threshold is raised for hospitals, consideration should be given to establishing a different threshold for other types of facilities. A number of states have two thresholds, one for hospitals and a lower one for nursing homes. See Appendix F.

The raising of the capital expenditure threshold would not, of course, preclude review of new services or of new beds. It would simply raise the threshold for projects that are solely capital expenditures, usually major renovations or replacements of facilities. It would, however, require an increase in the percentage of the development account allocated to the individual hospital; otherwise it would reduce hospital flexibility on non-reviewable projects, and perhaps encourage more large scale projects.

Another way to focus reviews on larger projects would be to abandon the capital expenditure threshold altogether, and raise the existing review threshold for third-year operating costs from $155,000 to perhaps double that amount, $300,000. (New services could still be subject to review, regardless of operating costs, for purposes of review of quality.) This could probably be effective only if rate setting were

TABLE 17

MAINE CON REVIEWS, 1984-1986

NUMBER OF PROJECTS REVIEWED BY DOLLAR SIZE

	No Capital Expen-diture	$1 - 100,000	$100,000-355,000	$355,000-732,000	$732,000-1M	$1M-2M	$2M-3M	Total
1984	2	17	4	8	4	0	0	35
1985	0	19	21	3	2	4	2	51
1986	3	27	1	7	7	7	4	56
Totals	5	63	26	18	13	11	6	142
Precent	3.5	44.4	18.3	12.7	9.2	7.7	4.2	100.0

retained, to serve as an enforcement mechanism. (Such a change might also encourage philanthropy for capital expenditures that would not be cost-generating, such as expenditures for self-supporting projects, for example, parking structures, or for one-time non-clinical projects, for example, improvements to lobby and lounge areas or landscaping.)

This would be an appropriate means of leaving more decisions, the smaller ones in terms of cost, in the hospitals' hands.

3. **Use CON to Regulate Certain Specialized Services.**
For some specialized services, such as heart surgery, quality standards are available and are suitable for use in CON review. The number of expected procedures can usually be predicted in advance, and the quality of service, in terms of morbidity and mortality has been found to depend on there being a minimum or threshold volume of procedures performed weekly or monthly, so as to develop and maintain the skills not only of the surgeons concerned, but other medical personnel, nurses, supporting technicians and others. The appropriate time for these standards to be used is at the time the facility proposes to offer the service. Maine has adopted standards for some such services. Others can be developed with the advice of appropriate advisory groups.

4. **Deregulate Replacement Equipment.**
When major medical equipment is initially acquired, it is now reviewable if the capital cost is $300,000 or more. This is probably a reasonable threshold, one that enables the state to control major expansion of the services employing the equipment. If hospital rate setting is retained, however, the state has no interest in reviewing replacement equipment so long as any additional costs can be met from the hospitals' individual development accounts.

It is true that newer models of equipment often have slightly greater capacity or a few new features, and this would give rise to some borderline cases where there would be a question as to whether the proposed equipment was simply for replacement or for something new.

Other states, New Hampshire for example, have found such questions manageable.

Deregulation of replacement equipment would require that some funds in the statewide Hospital Development Account be shifted to the individual hospital account.

5. **Deregulate Services that are Essentially Dependent on a Specialty Physician.**

Maine's current CON rules recognize that the "addition of a physician alone does not constitute a new service," but then narrows this by requiring review if it includes the "organized and specialized delivery" of the service. Examples are given in the regulations, such as psychiatry and orthopedic surgery. For Maine's rural hospitals, it may well take more than twelve months' good faith recruitment efforts to recruit a specialty physician when one leaves, or it may be that a physician with a different specialty appears on the scene, a kind of target of opportunity for the hospital. Nor is there any purpose served by such reviews being required in urban areas.

We are not aware of any other states that have moved to deregulate specific inpatient medical-surgical services. What a great many states have done, however, for many years, is simply to define "medical-surgical services" as a service, and within that, hospitals are free to add and delete specific services without CON review, subject to any licensing standards. Of course, if a new piece of major medical equipment or a major space renovation (capital expenditure) were required, it would be subject to review, but that would also be the case in Maine with such deregulation.

6. **Cover Services for which Regionalization is Planned.**

This requires that the state develop a long range plan with respect to which services are to be regionalized. Again, this can be done with outside help, from the industry, physicians, insurers, academics, and others. When those services have been selected for which

regionalization will be an important means to improve access and quality, they should be explicitly covered by CON, and a moratorium placed on their further development. Services such as organ transplantation might already be covered by CON, but not by any moratorium. Others, such as prenatal services, for example, might require a change in regulations or specialized statutory authority.

7. **Cover a Limited Number of High Tech Outpatient Services Regardless of Setting.**

These services usually involve very expensive, high technology equipment, such as magnetic resonance imaging (MRI) units and lithotrypters. They may also involve heavy site preparation costs and/or numerous high cost support and operating personnel. They generate high costs to the health care system and should be subject to CON review whether they are undertaken by hospitals, freestanding clinics, individual physicians or physician groups.

Fifteen states and the District of Columbia have such coverage simply by setting a dollar threshold for major medical equipment, and requiring CON approval regardless of purchaser. See Appendix H for a listing of states and their various provisions.

In choosing specific services to cover, the following criteria would be appropriate:

-- There is a substantial inpatient market for the service, and thus the prospect of inequity to hospitals if only they are subject to CON for the service.

-- There is a limited outpatient market, and thus only a limited prospect for market discipline on price.

-- The first provider to enter the market has a substantial competitive advantage, and thus the delay of CON review for some providers and not others would be inequitable.

8. **Consider Limiting CON Coverage of Outpatient Services.**
Outpatient services is an area where market forces may provide sufficient discipline, or may provide it for some services, to allow deregulation from CON. Any discontinuation would, however, have to be conditional on the presence of market discipline. This requires that there be no subsidies from inpatient services.

Maine could choose one of these options on coverage of outpatient services.

1. **Continue CON Coverage of Such Services.**
Hospitals could continue to cross subsidize outpatient services in an effort to remain competitive, but would have to accept continued CON review to provide discipline.

2. **Discontinue CON Coverage of Outpatient Services.**
This would require MHCFC to establish a basis for "carving out" outpatient costs. There would be a substantial amount of judgement involved, and there would be additional accounting requirements. While hospitals could not use inpatient revenues to subsidize outpatient services, they could compete on an even basis with non-hospital providers.

3. **Discontinue Coverage for Some Hospitals.**
Individual hospitals would be allowed to decide whether their outpatient services would be covered by CON or not. An agreed upon method of carving out outpatient costs would have to be negotiated to arrive at a method acceptable to MHCFC.

We believe that any of these three approaches would work. The choice is subject to the preferences of the parties in Maine, including MHCFC, the Department of Human Services, the Legislature, the industry and others.

IV. LONG-TERM CARE AND HOME HEALTH CARE: FINDINGS AND RECOMMENDATIONS

Long-term care and home health care in Maine are considered together in this chapter because of their close relationship, especially as to their potential as alternate sources of care for many patients. Realization of this potential may turn on relative cost and availability of each type of care. Both types of providers are now regulated by health planning/CON in Maine.

Three broad goals for the health care system were identified in the previous chapter as being the goals on which there is substantial agreement in Maine. These are goals relating to cost, access and quality. These were summarized in the Legislature's 1986 report on CON as access by all who need health care to quality services at reasonable cost. These goals are fully applicable to long-term care services and home health care services, although some of the factors affecting them differ among services.

Considerations of the cost of long-term care is greatly affected by the fact that the state's expenditures for long-term care have risen by forty-five percent from state FY 1981 to 1986.[6] By increasing its expenditures and the proportion of the LTC budget for in-home and community based services, the Department has no doubt prevented the total cost from rising even higher, but the institutional portion has risen from $77.85 million to $104.96 million in this period, a thirty-five percent increase. The impact on the state's Medicaid budget is an important consideration in evaluating any policy proposal in this area.

Access to long-term and home health care is a function of geographic access, economic access, and availability. Geographic access refers to whether services are available where they are needed. Economic access refers to the ability of patients to pay for or to have the services paid

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6 "Long-Term Care Plan" (Draft). Maine Department of Human Services, December 1986.

for by a third-party payer. In long-term care especially, this is heavily dependent on the sizes of Medicare and Medicaid budgets and also on the types of community-based and home health care that they will fund.

Quality of care in long-term care, on a systemwide basis, is often a matter of the appropriate level of care being available and reimbursable, and is also affected by the availability of suitable caregiving personnel. In home health care, system quality depends heavily on an appropriately broad range of services being available.

Costs of Long-Term Care in Maine

With the state Medicaid program paying for 75 percent of institutional long-term care in Maine, cost of care is most importantly the cost to the Medicaid budget. Using data from the Department's draft "Long-Term Care Plan" of December 1986, we estimate that these expenditures have risen at about 5 to 6 percent a year over the past five years, about the same as utilization in patient days. The increases in costs to private payers seem to roughly parallel Medicaid costs, in part, we were told, because the state is able to limit the cost differential to private payers by the criteria it uses in CON and section 1122 review of proposed new beds and in transfers of ownership of existing facilities.

The Department controls the unit cost of intermediate level care by setting a per diem rate prospectively. In our interviews with long-term care providers, we were told initially that the state rate was too low (although it is among the highest nationally). Further questioning and investigation indicated that the real problem was probably the inappropriate assignment of patients to that level of care. Because Maine has very few skilled nursing beds, some felt that sicker patients than should be, and patients with substance abuse and behavioral problems, were being assigned to intermediate level care beds. This is consistent with the high occupancy rates in intermediate care units (95 to 98 percent), although not necessarily consistent with the rates in skilled nursing units (mid-seventy percent).

In recent years, the Department has sought to improve Medicaid care and constrain its budget growth by funding programs for community-based and home-based health care in lieu of institutional care. Since 1980, the Alternative Long Term Care (ALTC) program provided Medicaid funding for home services, and it has been found to be generally cost effective.[7]

Access to Care

As indicated earlier, Maine's over-65 population is a larger percentage of the total than is the case nationally, and it is growing. Within the over-65 group, the 75-84 years and 85 years and older groups are growing as percentages of the population and in absolute numbers. Maine still maintains a relatively high ratio of long-term care beds with 66.1 beds per 1,000 persons 65 years and over, in 1982, compared to a national ratio of 54.7 beds per 1,000.

Within the broad category of long term care beds, skilled nursing beds have been declining in numbers while numbers of intermediate care beds have increased somewhat. The latter has been constrained in recent years by the Administrations' requests and actions by the Legislature, which specifies every two years the numbers of new ICF beds to be allowed, which are then allocated by the Department. The last Legislature, for example, authorized 270 new intermediate beds. The Department allocated 25 to a demonstration program and 245 will be allocated through the CON process to providers in four areas determined to need them most.

We saw in Chapter II (Table 9) that utilization of long-term care beds, as measured in patient days, increased from 1982 to 1984. There was no evidence from our interviews that this increase in use has not continued.

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[7] Fortinsky, Richard H., Andrew F. Coburn and Catherine A. McGuire. "A Profile of the Medicaid Alternate Long Term Care Program: An Analysis of Clients, Services and Costs, 1980-1984." Portland: University of Southern Maine, 1985.

Utilization of home health services by Medicaid patients has, of course, increased with increased funding. Data on other classes of patients were not available.

The location of nursing homes is an important factor in access, as was recognized in the Department's proposed rules of February 12, 1987, for allocation of the 245 new beds. Heavy out-migration from some counties was one of the factors considered in assessing a county's need for new beds.

The numbers of hospital patients who remain hospitalized longer than necessary while awaiting placement in nursing homes is a factor to be considered in determining whether there is a sufficient supply of long-term care beds. A study for the Southern Maine Association of Cooperating Hospitals[8] (SMACH) found that in 1985 12.57 percent of the acute care beds in SMACH hospitals were occupied by patients awaiting placement. Not only does this indicate a possible unnecessary use of a costly resource -- hospital beds -- but may indicate the need for more long-term care beds. The data should be interpreted cautiously, however; the patients may need a kind or level of care not available or there may be problems in arranging for sponsorship (payment sources) or other problems. The Department found, for the period December 1986 and February 1987, that the number of hospital patients awaiting placement ranged from 112 to 141, while at the same time the number of vacant nursing home beds varied from 140 to 338. The numbers themselves do not take into account either the levels of care offered in the vacant beds compared to the patients' needs, or the geographical proximity of the beds to patients' homes or families. They do indicate a probable access problem of some kind that should be explored.

Quality of Care

From our review of documents and our interviews, Maine seems satisfied with the quality of long-term and home health care being given, with two

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8 "Days Awaiting Placement in Southern Maine Hospitals." Intercept Associates, January 1986.

important exceptions. The first is the small number of skilled nursing beds mentioned above, and the even smaller number of suitable placements available for children or for patients with substance abuse or behavioral problems, or other conditions requiring "heavy care". This is partly a problem of providing appropriate kinds of nursing care and partly a problem due to having only a single reimbursement fee for each level of nursing care, regardless of the custodial resources required.

The second area of dissatisfaction is that of staffing, especially of finding, training, and retaining sufficient numbers of Certified Nursing Assistants (CNAs). The nursing home operators see it as partly a problem of wages being too low, while state officials say that the inflation increases in reimbursement have not been passed through in increased wages. The Legislature is now considering this problem.

Recommendations on Planning and CON for Long-Term Care and Home Health Care

The findings above indicate that regulation by health planning and CON has been generally helpful in meeting cost, access and quality goals in long-term care. Experience in Arizona, Utah, and other states has shown that deregulation in this area leads to construction of many new beds, but not necessarily in the areas of greatest need. See Table 18 on the following page for figures on the growth of long-term care beds and facilities in Arizona after deregulation in July 1983. Similar changes are said to have occurred in Utah after CON was ended in 1985, although they are not well documented. The nursing home associations in both Arizona and Utah advocate a return to CON, at least for long-term care.

Maine's Medicaid program pays for the great majority of long-term care, and thus is a substantial regulatory force through its payment system, along with planning and CON. Two areas of need were apparent, in comparison with other states. The first is the need for a system to ensure that patients receive appropriate amounts and kinds of care. Such a system would include pre-admission screening and on-going utilization review. The second is the need for some method of case-mix reimbursement, under which nursing homes

TABLE 18. ARIZONA LONG-TERM CARE FACILITIES

Before and After Termination of CON in June 1983

July 1 of Year	Number of Beds	% Incr.	Number of Facilities	% Incr	Occupancy Rate	% Fac. Locally Owned	% Beds Locally Owned	Beds/ 1,000 65+	Nursing Home Expend. Per Capita 65
1974	5,300				97%				
1980	8,024		80						
1981	8,115	1.1	79	-1.1					
1982	8,273	1.9	80	1.3	92.55%	55%	52%	24.5	$360.76
1983	8,753	5.8	84	5.0	87%				
1984	10,112	15.5	93	10.7					
1985	12,918*	27.7	112	20.4	82.8%	32%	30%	31.3	$553.81
1986	15,600**	20.0	128	14.3					
1987***	17,100	10.0	138	7.8					
1988***	18,608	9.0	150	8.7					

Note: Arizona Medicaid does not pay for LTC, but is exploring it.

* 75 of these were SNF beds.
** 80% of these beds are SNF beds.
*** Arizona Department of Health Services projections based on permits granted and pending.

Source: Office of Planning and Budget Department, Arizona Department of Health Services.

would be paid according to the extent of care provided. New York is developing such a system based on Resource Utilization Groups (RUGs), in which patients are reimbursed for on the basis of the resources required to meet their medical needs, mobility limitations, personal care, etc. Minnesota is already operating a similar system, and Massachusetts is starting to develop one. The Department has commissioned a study so that such a system could be developed to fit Maine's circumstances.

In the meanwhile, in addition to continuing the Legislative limitation on new construction of ICF beds, and its implementation through CON, Maine should strengthen its planning efforts in long-term care. Due account must be taken of the Department's Medicaid budget, the institutional portion of which purchases intermediate level care. Continuing effort is needed to solve the puzzle of skilled nursing care -- why there is so little offered in Maine compared to other states, and why, even so, it is declining in amount.

In a November 1986 report[9], Fortinsky offered eleven recommendations for improving access through means that included:

- increasing the number of SNF beds,
- channelling appropriate patients to them,
- improving the Medicare SNF reimbursement process, and
- increasing incentives for provision of SNF services through case-mix reimbursement and prospective pricing.

We believe these are valuable recommendations. In addition, planning is needed to determine need for these services on a population basis, as opposed to planning on the basis of available resources or previous years' trends. Such demand trends are heavily influenced by the kinds of barriers

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9 "Skilled Nursing Facility (SNF) Services in Maine: Issues, Trends and Recommendations for Promoting Access." Richard H. Fortinsky. Portland: University of Southern Maine, 1986.

identified by Fortinsky, and do not necessarily reflect people's needs for care. The Bureau of Medical Services has begun such an effort in developing its current draft long-term care plan. Population-based planning has important implications for the data needs of a state.[10] Maine's data needs for planning and CON are discussed in Chapter V. Population-based planning for long-term care in Maine should take account of the changes in recent years in the level of care needed by patients being discharged from hospitals, as well as the Department's efforts to increase the proportion and amount of community-based and home-based care.

In home health care, CON review has not been an important tool for meeting cost, access and quality goals. Rather, the Department's Medicaid budget, exercised through waivers, demonstration programs and the like, has effectively increased the amount and range of home health services offered. The Department's draft paper, "An Analysis of Certificate of Need Regulation of Home Health Care in Maine," dated March 1987, documents very well the case for removing home health care from CON. It points out that increased ease of market entry for new providers would not threaten quality of care, which could continue to be regulated through licensing. The Home Care Alliance of Maine advocates continued CON coverage of home health care as a protection for "consumers and providers alike from adverse effects of unregulated proliferation" of home health care providers. Some of our interviewees who represented home health care agencies expressed this view, and others emphasized the need to be on an equal footing with hospital-based home health care units. Certainly if CON coverage of home health care is coming to an end, the licensing process should be reviewed by the Department to ensure that it is effectively regulating quality of home health care.

In the absence of CON, increased competition in home health care, plus the purchasing power of Medicaid, are likely to maintain sufficient downward pressure on prices. Also, access to providers of their own choice would be increased for patients. This is confirmed by the experience of states that

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10 See "Specification of Data Needs for State-Level Health Planning" by Boyd Z. Palmer. Alpha Center Working Paper. September 1986.

have eliminated CON review for home health services, such as Connecticut, Maryland, Texas, Virginia, and Wyoming. Florida, which removed CON in 1983 for agencies that were not intending to be Medicare-Medicaid providers, has found that the distinction is unimportant. The effect has been that agencies set up two corporate entities, one for self-pay patients and one for Medicare-Medicaid that obtains a CON. Florida planning staff report that the state is likely to remove CON for all home health care. The only real difference in the two types of entities has been in the prices charged, which, if a state wishes to regulate them, would be better regulated directly.

If CON coverage of home health care should be removed, it would be important to ensure that it is not retained for hospital-based home health care. To do so would only add a little more tilt to the already uneven playing field that hospitals play on.

The availability and adequacy of reimbursement is quite as important as planning and CON for long-term care. As efforts are made to meet the need for skilled nursing care, an effort should be made to ensure that the payment system does not distort the way care is provided. In particular, it should not discourage providers from accepting heavy care patients.

To summarize, we have recommended that Maine should continue its efforts in population-based planning for long-term care, especially for skilled nursing care, eliminate CON review of home health care for all providers, and ensure that the payment system does not discourage the placement of heavy care patients. The recommendations in Chapter V on improving the planning and CON processes generally will also improve these activities on long-term care.

V. FINDINGS AND RECOMMENDATIONS ON MAINE'S PLANNING/CON PROCESS

We have recommended above that Maine continue to regulate acute, long-term and ambulatory care through planning/CON, and that it no longer regulate home health care. We have also recommended that the types of facilities and services covered by CON be extended in some respects, maintained in others, and reduced in still others, and that capital expenditure thresholds be raised, at least for hospitals. Some of these changes may require statutory changes. In this chapter, we present some findings about the state's planning/CON process itself, and offer some recommendations to improve its efficiency and effectiveness in regulating those portions of the health care system it continues to regulate. We expect that these recommendations can be implemented largely through changes in regulations, budget allocation, and work programs.

1. <u>Lack of review criteria, vague criteria</u>.

State staff and providers alike told us that lack of review criteria in many cases, or what is just as detrimental to an efficient review process, lack of sufficiently specific criteria, is a major problem. We found that often there were not quantitative criteria going beyond the general language of statute and regulations. In some cases, the review staff have sought to develop criteria during the course of review, drawing on other states' experience and provider suggestions. These efforts are not an adequate substitute for the planning activity of staff development of criteria, their subjection to a formal process (rulemaking or State Health Plan adoption) in which they are critiqued from many points of view, revision and adoption, followed by publication so that they are known to the public and to providers before projects are developed. This does not mean that Maine has to reinvent the wheel in each case. It should draw as much as possible on what other states have developed. Then it should have a process to refine the criteria and adapt them to the circumstances in Maine. The District of Columbia, Illinois, and other states have found it helpful to provide statutory authority for the CON program director to declare

a limited moratorium (120 to 180 days) on review of services for which criteria must be developed.

To the extent possible, the State Health Plan should include quantitative criteria for individual services and plan for their availability throughout the state on a regional basis. The existing quantitative standards in the State Health Plan are on a statewide basis, and thus of little use in an individual CON review. To be most useful, a criterion should state, for example, that "the proposed new acute care beds shall not cause the area's beds per one thousand population to exceed 3.7." This would allow a shortage area to come up to the statewide standard even before the beds in a surplus area had been closed or converted to other, needed uses. It would apply directly to the project under review. The areas for which standards are developed should be relatively small, e.g., the existing Community Health Planning Areas and the long-term care analysis areas.

Recommendation 1: Revise existing quantitative standards to apply to small areas within the state. For services for which criteria have not yet been adopted, adapt criteria that have been developed in other states. Subject all new standards and criteria to a public comment process, involving the industry and the public. As required for specific services, establish moratoria on new CON approvals until improved criteria can be adopted.

2. **Difficulty in applying criteria to specific cases.**

It is always difficult to apply criteria to specific CON reviews. When as many criteria as feasible have been quantified, there will remain some that should be applied but are not quantifiable, such as "the relationship of the proposed services to the existing health care systems" or "the availability of more effective methods of providing the proposed services." Such criteria can be brought down to the institutional level most effectively if done prior to the individual project review. This requires institution-specific planning by the state. An effective system has been developed by New York state in its

process for developing Medical Facilities Plans (MFPs).[11] A similar system, but adapted to Maine's goals and circumstances, could make the CON reviews less ambiguous and perhaps less controversial and subject to litigation.

Development of an institution-specific or MFP process for Maine would not replace CON review or development of specific criteria in the State Health Plan. It might well require additional resources. In return, there would be some savings in CON review staff work, especially on very large projects. There would also be an improvement in planning by the facilities themselves. In developing the plans, the state would necessarily have to rely on considerable input from facilities as to their intended directions in the next few years, and for specifics on what they propose in capital spending and service offerings as they proceed. In New York, despite some initial hesitancy by facilities to make their plans public, this has promoted better long-range planning by the facilities, as well as improving their working relationships with the state.

Development by the state of an MFP process would not be a quick or easy task. New York began with what, in the first cycle, were separate MFPs for hospitals, long-term care, and ambulatory facilities, by region. After those plans were adopted, a second cycle was initiated in which they sought to improve the plans in a number of ways, but especially by improving the linkages between acute, long-term and ambulatory care, both in the MFP planning process and in the delivery of services.

Recommendation 2: Consider developing an institution-specific medical facilities planning process, in which the state would involve providers in the development of the process, and in which the state would use information and plans from providers to develop the plan.

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11 See "Study of New York state's Medical Facilities Planning Process: Executive Summary" and "Final Report". Alpha Center, February 1986.

3. **Limited budget, and limited staff in numbers and skills.**

Planning staff have been reduced in numbers from seven to four in the past year, and the small remaining planning and review staff does not include all the skills needed for the wide range of activities involved in regulating a diversified health care system. While the recommendations in this report for some reductions in CON coverage and for some efficiencies in the review process will help, something more is needed and it seems unlikely to be obtained entirely through request for more budget and more staff positions. Two suggestions, both of which would probably require backing at least at the departmental level are offered. First, draw on other state staff as much as possible. Health personnel can assist in development of specific review criteria, architects and finance people on review of major construction proposals, etc. Second, expand the use of individual consultants. Academics and others provide short-term help on specific planning and review activities where the skills involved are not needed on a regular basis, but where a higher level of skill can be obtained than could be afforded on a full time basis.

Recommendation 3: Use other state staff and more individual consultants to supplement planning and review staff.

4. **Lengthy CON review process.**

It was generally agreed that the CON review process takes too long, and that far too many projects in the past have received decisions after the scheduled decision date. The flow chart on the following page lays out the current process. State staff have already made major improvements in timeliness and reported to the Legislature in February on them. In addition, some of the recommendations offered in this report, above on coverage and below in an administrative review process, should help still more. Timeliness of review decisions has both political costs (in terms of program support) and economic costs for the state, and economic costs for providers.

Recommendation 4: Continue to monitor and report on timeliness of reviews while other recommendations are being implemented to improve the efficiency of the review process.

5. **Too much staff review of small or unimportant projects.**
This is a problem in many states, and especially in Maine with its low dollar thresholds for review and its rate setting incentive for hospitals to have as much as possible reviewed under the Hospital Development Account. Most projects are approvable and are approved. Table 19 on the following page shows over 90 percent of projects approved. The raised thresholds recommended above should help considerably on this problem. Development of specific criteria and plans can also help for projects that continue to be covered or that become reviewable by adoption of the expanded coverage recommendations above. With specific criteria and plans, use can be made of "administrative review." Table 20 lists the states that provide for administrative review for specified types of services or applications. (This type of review may require legislative authorization to use in Maine.) Administrative review differs from non-review or "elect not to review" (now employed in Maine) in that the latter says, essentially, that there is no substantial review question raised even though the application may technically be subject to review. A decision to give an administrative review says that the application so clearly meets the review criteria that there is no need to go through an expensive, time-consuming review. As said above, though, this requires specific plans and criteria.

Recommendation 5: After specific criteria and plans have been developed in a number of areas, adopt a procedure for administrative review of applications clearly meeting review criteria.

6. **Unapproved projects carried over to the next year are given priority.**
Currently, projects that are approvable, but cannot be funded under the limit set by the statewide Hospital Development Account, can be carried over to the next annual review cycle and given priority over projects

TABLE 19

Maine CON Reviews

Dollar Value and Number

	Approved		Disapproved			
Letters of Intent and Applications	$ (Million)	#	$ (Million)	#	Percent Dollars Approved	Percent Number of Projects Approved
1979	29.9	34	2.8	2	91	94
1980	61.7	70	2.0	1	97	99
1981	67.0	52	2.5	2	96	96
1982	86.2	43	3.7	4	96	91
1983	32.9	42	1.8	2	95	97
Decisions						
1984	30.9	33	0	0	100	100
1985	38.1	48	2.7	4	93	92
1986	41.4	57	1.6	2	96	97

TABLE 20

States Allowing Administrative Reviews

	Criteria
District of Columbia	$400,000 to $100,000 capital expenditure for replacement or for non-clinical projects.
Florida	"Non-controversial" items such as parking lots, medical office buildings, equipment replacement, safety code corrections, CON transfers, CON cost overruns.
Georgia	Criteria not provided.
Hawaii	Items with "no significant impact on health care services" such as acquisition of capital asset not purchased; increase or decrease in beds without capital expenditure or operating expense increase over threshold; repairs to or replacement of equipment, items not directly related to patient care; ambulatory facilities with gross revenues for 3-year period below 10 times the operating budget threshold; emergency.
Illinois	Based on cost and budget, e.g., energy conservation, life safety code, equipment replacement.
Kentucky	Emergency; safety hazard; accreditation or licensing standards; replacement of equipment more than 5 years old; repair, alteration or improvement of physical plant without change in beds, service or equipment.
Michigan	Projects meeting need demonstrated by HSA or SHPDA; designed to meet state or local regulations; or where delay will unnecessarily increase cost or require inefficient use of staff time.
Missouri	Equipment replacement; non-clinical projects.
Montana	Decrease in bed capacity or services without adverse impact; equipment replacement without expansion; licensure and code requirements; licensure change for nursing care categories; geographic service area expansion of hold health agency; 6-month extension of CON; change of ownership without change of service or charges.

Table 20 (continued)

States Allowing Administrative Reviews

	Criteria
New Hampshire	Criteria not provided.
New York	Capital expenditures of $300,000 to $3,000,000 with no change in beds or services. In any one year, such administrative reviews for a facility may not exceed 0.5% of its combined allowable capital and operating costs.
North Dakota	Natural disaster; emergency; patient safety; projects mandated by legislature; cost overruns.
Oregon	Projects of low cost (unspecified) that include no new facilities, beds or services.
Pennsylvania	Under $2 million; change of the lesser of 10 beds or 10% of capacity if conforms to HSP; replacement of equipment; a project identified by the HSP or SHP; code requirements; emergency; new service with operating budget under $500,000; non-clinical projects; refinancing.
South Dakota	Criteria not provided.
Virginia	Capital expenditure between $600,000 and $3,000,000 with no change in beds or new service; capital expenditure of less than $600,000 that changes beds or creates a new service; ESRD and hospice services.
Washington	Purchase of unimproved land or refinancing of existing debt if agreed to by both HSA and SHPDA.
West Virginia	Purchase of a facility for less than $1,000,000; addition to a new service with capital expenditure of less than $100,000.

submitted for the first time in that second year. While this is said to reduce the uncertainty of the system for providers, it works against the public policy of approving, within affordable limits, those projects that are most needed in terms of the state's goals. It would serve the state better to require that unapproved projects compete on an equal basis with new projects the second year. Any burden on providers could be minimized by allowing the same application to be resubmitted, with only the most necessary updating and that in the form of attachments of change pages.

Recommendation 6: Require that unapproved projects that are carried over compete equally with new projects the second year.

7. **Lack of sufficient, up-to-date data for planning and CON.**

Maine has unusually good data on hospitals, especially financial data from the rate setting commission. In other health care areas, data are lacking. We found it difficult to obtain data on the volumes and kinds of care given in ambulatory settings, by home health agencies, or by freestanding imaging centers. Such data are needed, not only to plan for these areas themselves, but also to plan for acute care if the acute care sector is to be planned for as part of a total health care system. The first step would be to undertake a study of data needed for planning/CON (including hospital discharge data linked to financial data), existing sources of data, and unmet data needs. Support for such a major effort might be developed by coordinating it with the health data needs of other units of the Department of Human Services.

The essential types of data required for effective health planning and CON are[12]:

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12 This list is adapted from "Specification of Data Needs for State-Level Health Planning" by Boyd Z. Palmer. Alpha Center Working Paper. September 1985. More specific data considerations are discussed in the Alpha Center's Methodological Notes series, which includes separate volumes on acute care, long-term care and acute psychiatric bed need planning.

- demographic data, by geographic area within the state
- health status, and major health problems, by age group
- health resources inventory and location, preferably including individual physicians and ambulatory care centers
- health resources utilization -- patient origin data by providers, including out-of-state providers where possible
- health care costs and other financial data, preferably linked to the patient origin utilization data, above
- projections -- population projections, supplemented by trend analyses of health status and utilization data.

Whatever data can be acquired are most useful if published, as Maine did in Vol. IV of its "1985 State Health Plan for Maine." Providers can then plan from the same data base as the state.

Recommendation 7: Initiate a comprehensive study of data needed for planning/CON, existing sources of data, and unmet data needs and how they can be met.

* * * *

In Chapters III and IV, we reviewed acute care, ambulatory care, long-term care and home health care in Maine in light of its cost, quality and access goals, and recommended that regulation through planning and CON be retained for large portions of the system, whether or not Maine continues to have hospital rate setting. We offered some specific recommendations on the types of services and facilities to be reviewed under CON in Maine and some, including home health services, that need not be reviewed. In Chapter V, we provided recommendations for improving the actual process of planning and CON review.

APPENDIX A

INTERVIEW PROTOCOL AND LIST OF INTERVIEWEES

PROTOCOL

1. WHAT ARE MAJOR PROBLEMS FACING THE MAINE HEALTH SYSTEM?

2. MAJOR STRENGTHS? WHAT DO YOU WANT TO PRESERVE ABOUT MAINE'S HEALTH SYSTEM?

3. WHAT'S GOING ON WITH INVESTMENT IN THE HEALTH CARE INDUSTRY?

Change/ Level	Range and Types Services	Effects of RS	In Absence of CON, What?	In Absence of Maine RS Controls, What?	In Absence Of Both?
Hospitals					
LTC					
Ambulatory					

4. HOW IS THE HEALTH CARE SYSTEM CHANGING?

5. WHERE WOULD YOU THINK THE HEALTH CARE SYSTEM OUGHT TO BE MOVING?

6. NOW LET'S TALK ABOUT THE EXISTING PLANNING/REGULATORY SYSTEM.

	Degree of Constraint	Access	Profitability/ Viability	Innovation
A. Planning				
B. CON				
C. Rate-Setting				

	Appropriate Scope/Focus	Efficiency	Fairness	Adequate Resources To Do Job
A. Planning				
B. CON				
C. Rate-Setting				

ON BALANCE, HOW DO YOU ASSESS THE EFFECTIVENESS OF PLANNING, CON, RS?

7. WHERE DO YOU THINK THE PLANNING/REGULATORY SYSTEM SHOULD BE GOING?

List of Interviewees

LIST OF INTERVIEWEES

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APPENDIX B

CON WORKGROUP MEMBERS

APPENDIX B

CON WORKGROUP

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Chris Boisvert
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Rachel Hoar, Project Review
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Senator Paul Gauvreau
Lewiston, ME

APPENDIX C

MAINE AND THE UNITED STATES:
DATA TABLES

TABLE 1

BASIC DATA -- MAINE AND UNITED STATES

Column No.:	1	2	3	4	5	6	7	8	9	10	11
	YEAR	July 1 Civilian Population	% Age 65+	Community Hospitals (Number)	Community Hospital Beds	Total Admissions	Total In-Patient Days	Average Daily Census	Surgical Operations	Total Expenses (Mill. $)	Net Total Revenues (Mill. $)
Maine	1971	1,005		46	4,271	170,428	1,264,484	3,466	79,270	$142.16	
Maine	1972	1,024		45	4,284	149,705	1,107,630	3,025	64,776	$100.35	
Maine	1973	1,035	11.8	45	4,360	153,009	1,139,504	3,122	68,013	$114.37	
Maine	1974	1,050	11.7	50	4,764	170,428	1,264,484	3,466	79,270	$142.16	
Maine	1975	1,063	11.8	49	4,827	169,872	1,262,686	3,457	82,922	$173.47	$175.61
Maine	1976	1,080	12.0	49	4,912	173,037	1,298,637	3,555	80,047	$204.34	$205.97
Maine	1977	1,095	12.0	49	5,058	172,735	1,297,685	3,556	80,676	$241.76	$246.08
Maine	1978	1,104	12.2	49	5,149	174,231	1,344,461	3,689	80,977	$272.34	$281.98
Maine	1979	1,115	12.3	48	5,070	173,901	1,375,304	3,776	85,366	$312.86	$324.14
Maine	1980	1,117	12.5	46	5,075	177,837	1,403,558	3,837	88,612	$366.58	$374.84
Maine	1981	1,123	12.7	45	5,215	176,798	1,413,659	3,874	91,833	$424.82	$439.99
Maine	1982	1,127	13.0	43	5,022	170,968	1,317,804	3,610	100,167	$480.39	$498.53
Maine	1983	1,136	13.0	43	4,810	171,979	1,241,308	3,402	101,601	$538.56	$561.17
Maine	1984	1,149	13.1	42	4,913	168,413	1,245,034	3,402	100,413	$570.32	$594.61
Maine	1985	1,156	13.1	42	4,870	162,818	1,193,316	3,271	100,498	$601.41	$627.27

	YEAR	July 1 Civilian Population	% Age 65+	Community Hospitals (Number)	Community Hospital Beds	Total Admissions	Total In-Patient Days	Average Daily Census	Surgical Operations	Total Expenses (Mill. $)	Net Total Revenues (Mill. $)
U. S. Total	1971	204,869		5,865	866,519	32,865,867	255,193,062	699,687	16,193,348	$32,616.72	$0.00
U. S. Total	1972	207,514		5,746	878,592	30,708,650	242,297,315	662,587	14,768,063	$25,462.28	$0.00
U. S. Total	1973	209,602	10.2	5,789	897,830	31,671,377	247,820,857	679,718	15,412,808	$28,372.00	$0.00
U. S. Total	1974	211,633	10.3	5,875	925,996	32,865,867	255,193,062	699,687	16,193,348	$32,616.72	$0.00
U. S. Total	1975	213,780	10.5	5,875	941,844	33,434,659	257,593,729	706,218	16,663,846	$38,961.59	$39,247.73
U. S. Total	1976	215,891	10.7	5,857	956,284	33,978,775	260,742,238	713,011	16,832,106	$44,954.88	$46,179.55
U. S. Total	1977	218,106	10.9	5,881	969,105	34,273,444	260,834,979	714,962	17,144,447	$51,646.60	$52,831.37
U. S. Total	1978	220,461	11.0	5,851	975,403	34,505,841	262,064,460	718,335	17,150,124	$58,179.89	$59,761.17
U. S. Total	1979	222,968	11.2	5,842	983,694	35,099,231	265,207,139	727,334	18,268,581	$66,003.75	$68,026.32
U. S. Total	1980	225,557	11.3	5,830	988,387	36,143,445	273,085,130	746,866	18,767,666	$76,851.16	$79,738.74
U. S. Total	1981	227,870	11.4	5,813	1,003,435	36,438,232	278,405,882	763,101	19,236,206	$90,572.44	$93,967.48
U. S. Total	1982	230,119	11.7	5,801	1,012,191	36,379,446	278,043,093	762,175	19,593,639	$104,875.68	$109,457.89
U. S. Total	1983	232,282	11.7	5,783	1,010,482	36,151,780	273,196,906	748,899	19,844,908	$116,437.73	$121,497.53
U. S. Total	1984	234,762	11.9	5,759	1,017,057	35,155,462	256,603,081	701,687	19,908,241	$123,336.43	$129,952.41
U. S. Total	1985	237,033	11.9	5,732	1,000,678	33,448,991	236,619,446	648,892	20,113,350	$130,499.07	$138,881.57

BASIC DATA -- MAINE AS PERCENT OF U. S.

	YEAR	July 1 Civilian Population	% Age 65+ (% above US)	Community Hospitals (Number)	Community Hospital Beds	Total Admissions	Total In-Patient Days	Average Daily Census	Surgical Operations	Total Expenses (Mill. $)	Net Total Revenues (Mill. $)
Maine vs. US	1971	0.49%		0.78%	0.49%	0.52%	0.50%	0.50%	0.49%	0.44%	
Maine vs. US	1972	0.49%		0.78%	0.49%	0.49%	0.46%	0.46%	0.44%	0.39%	
Maine vs. US	1973	0.49%	15.81%	0.78%	0.49%	0.48%	0.46%	0.46%	0.44%	0.40%	
Maine vs. US	1974	0.50%	12.91%	0.85%	0.51%	0.52%	0.50%	0.50%	0.49%	0.44%	
Maine vs. US	1975	0.50%	2.86%	0.83%	0.51%	0.51%	0.49%	0.49%	0.50%	0.45%	0.45%
Maine vs. US	1976	0.50%	12.15%	0.84%	0.51%	0.51%	0.50%	0.50%	0.48%	0.45%	0.45%
Maine vs. US	1977	0.50%	10.09%	0.83%	0.52%	0.50%	0.50%	0.50%	0.47%	0.47%	0.47%
Maine vs. US	1978	0.50%	10.91%	0.84%	0.53%	0.50%	0.51%	0.51%	0.47%	0.47%	0.47%
Maine vs. US	1979	0.50%	9.82%	0.82%	0.52%	0.50%	0.52%	0.52%	0.47%	0.47%	0.48%
Maine vs. US	1980	0.50%	10.62%	0.79%	0.51%	0.49%	0.51%	0.51%	0.47%	0.48%	0.47%
Maine vs. US	1981	0.49%	11.40%	0.77%	0.52%	0.49%	0.51%	0.51%	0.48%	0.47%	0.47%
Maine vs. US	1982	0.49%	11.11%	0.74%	0.50%	0.47%	0.47%	0.47%	0.51%	0.46%	0.46%
Maine vs. US	1983	0.49%	11.11%	0.74%	0.47%	0.48%	0.45%	0.45%	0.51%	0.46%	0.46%
Maine vs. US	1984	0.49%	10.08%	0.73%	0.48%	0.48%	0.49%	0.48%	0.50%	0.46%	0.46%
Maine vs. US	1985	0.49%	10.08%	0.73%	0.49%	0.49%	0.50%	0.50%	0.50%	0.46%	0.45%

TABLE 2
CALCULATED RATIOS - - MAINE AND UNITED STATES

Column No.:	1	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	YEAR	Adjusted Exp. per Admission	Adjusted Exp. per Day	Occupancy Rate (percent)	Avg. Length of stay ALOS	Beds per 1000 Population	Average Hosp. Size (Beds)	Admissions per 1000 Population	Inpt. Days per 1000 Population	Surg. Oper. per 1000 Population	Surg. Oper. per 100 Admissions	Expenses per Capita	Expenses per Admission	Expenses per Day	Total Net Margin
Maine	1971			81.15%	7.42	4.25	93	169.58	1,258.19	70.88	46.51	$141.45	$834.14	$112.43	
Maine	1972			70.61%	7.40	4.18	95	146.20	1,081.67	63.26	43.27	$98.00	$670.32	$90.60	
Maine	1973			71.61%	7.45	4.21	97	147.83	1,100.97	65.71	44.45	$110.50	$747.47	$100.37	
Maine	1974			72.75%	7.42	4.54	95	162.31	1,204.27	75.50	46.51	$135.39	$834.14	$112.43	
Maine	1975			71.62%	7.43	4.54	99	159.80	1,187.85	70.01	40.81	$163.19	$1,021.18	$137.38	1.23%
Maine	1976			72.37%	7.50	4.55	100	160.22	1,202.44	74.12	46.26	$189.20	$1,180.90	$157.35	0.80%
Maine	1977			70.30%	7.51	4.62	103	157.75	1,185.10	73.68	46.71	$220.79	$1,399.60	$186.30	1.79%
Maine	1978	$1,300.99	$168.74	71.64%	7.72	4.66	105	157.82	1,217.81	73.35	46.48	$246.68	$1,563.10	$202.56	3.54%
Maine	1979	$1,479.82	$188.09	74.48%	7.91	4.55	106	155.97	1,233.46	76.56	49.09	$280.59	$1,799.07	$227.48	3.61%
Maine	1980	$1,706.74	$216.51	75.61%	7.89	4.54	110	159.21	1,256.54	79.33	49.83	$328.18	$2,061.33	$261.18	2.25%
Maine	1981	$1,976.36	$240.54	74.29%	8.00	4.64	116	157.43	1,258.82	81.77	51.94	$378.29	$2,402.86	$300.51	3.57%
Maine	1982	$2,269.79	$295.96	71.86%	7.71	4.46	117	151.70	1,169.30	88.88	58.59	$426.26	$2,809.82	$364.54	3.78%
Maine	1983	$2,533.73	$351.42	70.73%	7.22	4.23	112	151.39	1,092.70	89.44	59.08	$474.08	$3,131.55	$433.86	4.20%
Maine	1984	$2,717.32	$368.28	69.24%	7.39	4.28	117	146.57	1,083.58	87.39	59.62	$496.36	$3,386.44	$458.08	4.26%
Maine	1985	$2,870.23	$393.79	67.17%	7.33	4.21	116	140.85	1,032.28	86.94	61.72	$520.25	$3,693.73	$503.98	4.30%

	YEAR	Adjusted Exp. per Admission	Adjusted Exp. per Day	Occupancy Rate (percent)	Avg. Length of stay ALOS	Beds per 1000 Population	Average Hosp. Size (Beds)	Admissions per 1000 Population	Inpt. Days per 1000 Population	Surg. Oper. per 1000 Population	Surg. Oper. per 100 Admissions	Expenses per Capita	Expenses per Admission	Expenses per Day	Total Net Margin
U. S. Total	1971			80.75%	7.76	4.23	148	160.42	1,245.64	79.04	49.27	$159.21	$992.42	$127.81	
U. S. Total	1972			75.41%	7.89	4.23	153	147.98	1,167.62	71.17	48.09	$122.70	$829.16	$105.09	
U. S. Total	1973			75.71%	7.82	4.28	155	151.10	1,182.34	73.53	48.66	$135.36	$895.82	$114.49	
U. S. Total	1974			75.58%	7.76	4.38	158	155.30	1,205.83	76.52	49.27	$154.12	$992.42	$127.81	
U. S. Total	1975			74.98%	7.70	4.41	160	156.40	1,204.95	77.95	49.84	$182.25	$1,165.31	$151.25	0.73%
U. S. Total	1976			74.56%	7.67	4.43	163	157.39	1,207.75	77.97	49.54	$208.23	$1,323.03	$172.41	2.72%
U. S. Total	1977			73.78%	7.61	4.44	165	157.14	1,195.91	78.61	50.02	$236.80	$1,506.90	$198.00	2.29%
U. S. Total	1978	$1,474.21	$194.34	73.64%	7.59	4.42	167	156.52	1,188.71	77.79	49.70	$263.90	$1,686.09	$222.01	2.72%
U. S. Total	1979	$1,641.48	$217.34	73.94%	7.56	4.41	168	157.42	1,189.44	81.93	52.05	$296.02	$1,880.49	$248.88	3.06%
U. S. Total	1980	$1,850.96	$245.12	75.56%	7.56	4.38	170	160.24	1,210.71	83.21	51.93	$340.72	$2,126.28	$281.42	3.76%
U. S. Total	1981	$2,171.20	$284.33	76.05%	7.64	4.40	173	159.91	1,221.78	84.42	52.79	$397.47	$2,485.64	$325.33	3.75%
U. S. Total	1982	$2,500.52	$327.37	75.30%	7.64	4.40	174	158.09	1,208.26	85.15	53.86	$455.75	$2,882.83	$377.19	4.37%
U. S. Total	1983	$2,789.18	$369.48	73.53%	7.58	4.38	176	155.64	1,178.14	85.43	54.89	$501.28	$3,220.80	$426.20	4.35%
U. S. Total	1984	$2,995.38	$411.10	68.99%	7.30	4.33	177	149.75	1,093.03	84.80	56.63	$525.37	$3,508.31	$480.65	5.36%
U. S. Total	1985	$3,244.74	$460.19	64.85%	7.07	4.22	175	141.12	998.26	84.85	60.13	$550.55	$3,901.44	$551.51	6.42%

	YEAR	Adjusted Exp. per Admission	Adjusted Exp. per Day	Occupancy Rate (percent)	Avg. Length of stay ALOS	Beds per 1000 Population	Average Hosp. Size (Beds)	Admissions per 1000 Population	Inpt. Days per 1000 Population	Surg. Oper. per 1000 Population	Surg. Oper. per 100 Admissions	Expenses per Capita	Expenses per Admission	Expenses per Day	Total Net Margin
		< - - - - - - - - - - - - - - CALCULATED RATIOS - - MAINE AS PERCENT ABOVE US													
Maine vs. US	1971			0.50%	-4.45%	0.48%	-37.16%	5.71%	1.01%	-0.21%	-5.60%	-11.15%	-15.95%	-12.04%	
Maine vs. US	1972			-6.37%	-6.23%	-1.19%	-37.74%	-1.21%	-7.36%	-11.11%	-10.03%	-20.13%	-19.16%	-13.79%	
Maine vs. US	1973			-5.42%	-4.82%	-1.66%	-37.53%	-2.16%	-6.86%	-10.64%	-8.66%	-18.36%	-16.56%	-12.33%	
Maine vs. US	1974			-3.71%	-4.45%	3.69%	-39.55%	4.52%	-0.13%	-1.33%	-5.60%	-12.15%	-15.95%	-12.04%	
Maine vs. US	1975			-4.49%	-3.52%	3.07%	-38.55%	2.16%	-1.42%	0.08%	-2.06%	-10.46%	-12.37%	-9.17%	68.01%
Maine vs. US	1976			-2.93%	-2.20%	2.66%	-38.60%	1.80%	-0.44%	-4.94%	-6.62%	-9.14%	-10.74%	-8.74%	-70.72%
Maine vs. US	1977			-4.70%	-1.29%	3.96%	-37.36%	0.39%	-0.90%	-6.27%	-6.63%	-6.76%	-7.12%	-5.91%	-22.11%
Maine vs. US	1978	-11.78%	-13.17%	-2.72%	1.60%	5.41%	-36.97%	0.83%	2.45%	-5.71%	-6.49%	-6.52%	-7.29%	-6.76%	30.24%
Maine vs. US	1979	-9.85%	-13.46%	0.73%	4.67%	3.07%	-37.27%	-0.92%	3.70%	-6.56%	-5.69%	-5.21%	-4.33%	-3.60%	17.66%
Maine vs. US	1980	-7.79%	-11.67%	0.06%	4.46%	3.68%	-34.92%	-0.64%	3.79%	-4.66%	-4.04%	-3.66%	-3.05%	-7.19%	-40.03%
Maine vs. US	1981	-8.97%	-12.59%	-2.32%	4.65%	5.46%	-32.86%	-1.55%	3.03%	-3.13%	-1.61%	-4.83%	-3.33%	-7.63%	-4.74%
Maine vs. US	1982	-9.23%	-9.59%	-4.54%	0.85%	1.31%	-33.07%	-4.04%	-3.22%	4.39%	8.78%	-6.47%	-2.53%	-3.35%	-13.57%
Maine vs. US	1983	-9.16%	-4.89%	-3.81%	-4.49%	-3.43%	-36.48%	-2.73%	-7.09%	4.69%	7.62%	-5.42%	-2.77%	1.80%	-3.39%
Maine vs. US	1984	-9.28%	-10.42%	0.37%	1.20%	-1.30%	-33.76%	-2.12%	-0.86%	3.05%	5.29%	-5.52%	-3.47%	-4.70%	-20.61%
Maine vs. US	1985	-11.54%	-14.43%	3.58%	3.61%	-0.21%	-33.58%	-0.19%	3.41%	2.45%	2.65%	-5.50%	-5.32%	-8.62%	-33.05%

TABLE 3

RANKINGS, MAINE COMPARED TO 49 STATES AND D. C.

Column No.:	1	26	27	28	29	30	31	32	33	34
	YEAR	July 1 Civilian Population	% Age 65+	Adjusted Exp. per Admission	Adjusted Exp. per Day	Occupancy Rate (percent)	Avg. Length of stay ALOS	Beds per 1000 Population	Average Hosp. Size (Beds)	Admissions per 1000 Population
Maine	1971	38				22	26	20	40	24
Maine	1972	38				36	31	24	39	30
Maine	1973	38	9			33	28	23	39	32
Maine	1974	38	10			28	26	20	42	22
Maine	1975	38	10			29	26	19	41	26
Maine	1976	38	10			24	23	20	43	25
Maine	1977	38	11			27	22	20	41	25
Maine	1978	38	11	26	32	27	21	18	41	25
Maine	1979	38	10	24	32	21	15	22	42	26
Maine	1980	38	11	23	30	19	17	21	41	26
Maine	1981	38	11	24	28	24	18	20	41	26
Maine	1982	38	11	24	28	28	26	23	40	26
Maine	1983	38	11	22	26	27	30	26	42	28
Maine	1984	38	11	25	30	14	21	28	41	29
Maine	1985	38	11	29	34	13	17	27	41	26

Column No.:	1	35	36	37	38	39	40	41
	YEAR	Inpt. Days per 1000 Population	Surg. Oper. per 1000 Population	Surg. Oper. per 100 Admissions	Expenses per Capita	Expenses per Admission	Expenses per Day	Total Net Margin
Maine	1971	20	23	31	23	25	26	
Maine	1972	35	42	36	32	29	28	
Maine	1973	32	42	34	30	25	24	
Maine	1974	21	23	31	24	25	26	
Maine	1975	22	21	23	24	23	25	37
Maine	1976	22	31	32	24	24	24	45
Maine	1977	24	34	31	18	22	23	38
Maine	1978	20	32	34	19	23	24	25
Maine	1979	19	35	32	20	19	26	29
Maine	1980	20	30	31	19	19	25	44
Maine	1981	22	27	26	21	19	26	31
Maine	1982	27	17	13	23	18	26	39
Maine	1983	32	18	13	25	20	18	40
Maine	1984	27	18	19	19	21	25	42
Maine	1985	21	17	24	21	22	29	44

APPENDIX D

MAINE HOSPITAL'S PERCENT OPERATING MARGINS

Appendix D

Maine Hospitals' Percent Operating Margins

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Maine Total	0.6	1.2	1.2	1.8	1.7	2.1
By Size of Hospital						
Large (111+ beds)	1.1	2.0	1.8	2.8	2.3	2.7
Medium (56-110 beds)	0.1	-0.1	0.9	0.2	0.6	1.3
Small (1-55)	-1.7	-0.9	-2.1	-0.8	0.2	0.5

Source: "Maine Hospitals' Financial Data Book: 1979-80 through 1984-85." Augusta, Maine Hospital Association.

APPENDIX E

MAINE'S HOSPITAL RATE-SETTING PROGRAM: THE MAINE HEALTH CARE FINANCE COMMISSION

MAINE'S HOSPITAL RATE-SETTING PROGRAM:

THE MAINE HEALTH CARE FINANCE COMMISSION

Factors leading to establishment of MHCFC

It soon became apparent that health care costs were continuing to rise, consuming an increasing share of individual, corporate, and governmental budgets. Retrospective cost based reimbursement was feeding not fighting the increase in health costs and was threatening the financial viability of some health care providers. The prominent question to be answered at the state and federal level was "How much of our resources could we, or should, devote to health care?"

The Maine Health Care Finance Commission Established

In 1983, Maine established a prospective payment system for hospitals and created the Health Care Finance Commission to implement this system. The prospective payment system requires the determination of the financial requirements of each health care provider and the aggregate amount the provider must charge to meet those requirements. This is determined in advance by the Health Care Finance Commission. If the provider actually spends less to provide those services, it may keep the extra. The next year's financial requirements are based on the previous year's financial requirements, with adjustments, and not on the actual costs. So, the hospital is not penalized for saving by a reduction in financial requirements. Under the cost based system, the hospital would have received its actual costs, which, if less, would have resulted in less revenues for the hospital. A prospective payment system has incentives that are just the opposite from those of a cost based system. in a cost based system, the more you send the more you get reimbursed. There is no incentive to save. As noted above, a prospective payment system provides a benefit, if you save. In addition, you are guaranteed reimbursements for your approved financial requirements, your "budget."

The Relationship between the Health Care Finance Commission Act and the Certificate of Need Program

A hospital's financial requirements are based on the costs of existing equipment and programs,adjusted each year to account for inflation and other items. Expenses for Certificate of Need projects (new services, construction, or equipment) could not automatically be added to the financial requirements of a Hospital since they would represent new charges not previously associated with their budgetary needs. Hospitals could not collect the costs for these services.

The legislature, at the same time it enacted the Health Care Finance Commission Act, required that all Certificate of Need projects which were approved be automatically added to a hospital's financial requirements.. The costs of these services was automatically passed on to the payors under the payment system established by the Health Care Finance Commission Act. This change to the Certificate of Need program provided link between the Health Care Finance Commission laws and the Certificate of Need Act. Hospital regulation through the Commission would control the costs of existing services. Certificate of Need approval would be the cost containment tool for control for new services, construction and equipment. It would help control health care costs by requiring a state agency to review each new service, construction project, or purchase of new equipment and grant approval to only those projects which were actually necessary. Existing programs were held to a budget and any new programs added to that budget had to be found necessary of the system would not allow increases to a hospital's charges to pay for that service or equipment.

The two parts of the system, when combined, cover the whole of health care for those facilities subject to cost regulation and Certificate of Need review.

The Certificate of Need Development Account

Also, in 1983, the Legislature enacted the Certificate of Need Development Account. The Certificate of Need program was required to

approve every project that was not duplicative or otherwise unnecessary. Neither the Certificate of Need program nor the Health Care Finance Commission addressed the issue of how much of our resources we should devote to expanding our health services. The cumulative financial impact of Certificate of Need approved projects could not be considered. its cost would be passed on automatically to the payors of health care. The Certificate of Need Development Account established an affordable limit on growth.

The Certificate of Need Development Account established a limit on the total dollar amount on any one year. This amount is established by statute in the first two years under the Health Care Finance Act at 1% of the total hospital operating expenses for the state and is set by the Health Care Finance Commission in subsequent years. Legislation enacted in 1985 (P.L.1985, C. 347) amended the method in which debits against the account are determined and allowed projects of unusually high cost to be debited against the account over several years.

APPENDIX F

STATE CON CAPITAL EXPENDITURES AND SERVICE REVIEW THRESHOLDS

APPENDIX F

STATE CON CAPITAL EXPENDITURE AND SERVICE REVIEW THRESHOLDS

State	Capital Expenditure Threshold	Estimated Operating Budget for New or Expanded Service	Major Medical Equipment for Inpatient Use	Comments
Alabama	$ 736,200	$ 245,000	$ 245,000	
Alaska	$1,000,000	--	$1,000,000	
Arizona	--	--	--	No CON or 1122
Arkansas	$ 736,200	$ 306,750	$ 400,000	
California	--	--	--	No CON or 1122
Colorado	$2,000,000	--	$1,000,000	$1M cap. exp. for new service; any new facility reviewable
Connecticut	$ 714,000	Any	$ 400,000	
Delaware	$ 150,000	Any	$ 150,000	
Dist. of Col.	$ 600,000	$ 250,000	$ 400,000	
Florida	$ 736,200	$ 306,750	$ 400,000	
Georgia	$ 736,200	Any	$ 429,012	$600K for repl. equipment
Hawaii	$ 600,000	Any	$ 250,000	$400K for repl. equipment
Idaho	$ 600,000	--	$ 600,000	1122 only
Illinois	$ 736,200	See comments	$ 400,000	$306,750 for specified new service only
Indiana	$1,000,000	--	$1,000,000	
Iowa	$ 600,000	See comments	$ 400,000	$250,000 annual op cost + cap. exp.
Kansas	--	--	--	No CON or 1122
Kentucky	$ 634,200	$ 264,250	$ 422,800	
Louisiana	$ 600,000	--	$ 600,000	1122 only
Maine	$ 350,000	$ 155,000	$ 300,000	
Maryland	$ 735,000	$ 305,000	Not covered	MME is licensed in any setting
Massachusetts	$ 600,000	See comments	$ 400,000	$250,000 or substantial change in service
Michigan	$ 150,000	Any	$ 150,000	
Minnesota	$ 600,000	--	$ 600,000	1122 only
Mississippi	$1,000,000	$ 150,000	$ 750,000	
Missouri	$ 736,000	$ 306,000	$ 400,000	
Montana	$ 750,000	See comments	$ 500,000	$100,000 annual op cost + cap. exp.
Nebraska	$ 561,335	$ 280,678	$ 400,000	
Nevada	$ 736,200	$ 306,750	$ 400,000	
New Hampshire	$1,000,000	--	$ 400,000	
New Jersey	$ 600,000	Any	$ 400,000	
New Mexico	$ 600,000	--	$ 600,000	1122 only
New York	$300,000 (See comments)	Any	$ 300,000	Admin. review if $300K to $3M and less than 0.5% impact on op. costs
North Carolina	$1,028,000	$ 324,000	$ 600,000	
North Dakota	$ 750,000	$ 300,000	$ 500,000	
Ohio	$ 736,200	$ 306,750	$ 400,000	$200,000 for technologically innovative equipment
Oklahoma	$ 3M FY 87/ $ 500,000	Any	$3,000,000	Hospitals FY 88, $4 FY 89, $5M/ nursing homes
Oregon	See comments	$ 306,750	$1,000,000	Lesser of $1M (indexed) or $250,000 + ½% of ann. revenue
Pennsylvania	$ 760,495	$ 316,873	$ 760,495	MME $400K for non-health care facilit
Rhode Island	$ 300,000	$ 150,000	$ 300,000	
South Carolina	$ 600,000	$ 250,000	$ 400,000	
South Dakota	$ 670,404/ $ 183,690	$ 279,336/ $ 91,845	$ 400,000/ $ 150,000	Hospitals/ nursing homes
Tennessee	$1,000,000	$ 500,000	$1,000,000	Only cap. exp. directly related to patient care
Texas	--	--	--	No CON or 1122
Utah	--	--	--	No CON or 1122
Vermont	$ 300,000	$ 150,000	$ 250,000	
Virginia	$ 700,000	Any	$ 400,000	MME of any amount if a new service is established
Washington	$1,111,000	$ 556,000	$1,111,000	
West Virginia	$ 714,000	$ 297,500	$ 400,000	
Wisconsin	$1,000,000/ $ 600,000	--	$1,000,000/ $ 600,000	Hospitals/ nursing homes
Wyoming	--	--	--	No CON or 1122

APPENDIX G

STATE CON REVIEW STANDARDS FOR SPECIALIZED SERVICES

DEPARTMENT OF PUBLIC HEALTH

DETERMINATION OF NEED GUIDELINES

FOR

MAGNETIC RESONANCE IMAGING (MRI)

OCTOBER 22, 1985

Prepared by: Executive Office of Human Services and
Determination of Need Program
150 Tremont Street
Boston, MA 02111

I. INTRODUCTION

The purpose of this document is to update the Nuclear Magnetic Resonance (NMR) Guidelines adopted by the Public Health Council in May of 1984. These updates reflect the rapid growth of NMR, now more commonly called Magnetic Resonance Imaging (MRI), resulting in health care requirements which differ from those projected under the previous guidelines.

The update of these guidelines was prepared by Staff from the Executive Office of Human Services, the Determination of Need Office, and the Health Planning Council for Greater Boston, Inc. (HSA IV). Information was provided by a Technical Advisory Committee comprised of physicians, third party payors, planners and other health care professionals involved in the clinical application, administration and reimbursement of MRI, and on some review of the literature. The revised guidelines will be used to review MRI applications in a clear and consistent manner, while fulfilling the Determination of Need mandate to ensure satisfactory access to quality health care at a reasonable cost.

II. BACKGROUND

Magnetic Resonance Imaging (MRI) uses the interaction of a magnetic field, radio frequency waves and the body's own hydrogen atoms to produce energy emissions which are reconstructed by a computer to form images. This process, referred to as proton imaging, is based on the intrinsic differences in hydrogen density between fat, muscle, blood and bone. It produces images which in some instances has significantly improved physicians' ability to diagnose disease.

At the present time, proton imaging is the most common use of MRI. In addition to proton imaging, MR has shown early promise in the field of spectroscopy, i.e., actual evaluation of metabolic processes of the body. Although much research continues in spectroscopy, routine clinical application of this process is still some years away.

II. BACKGROUND (cont.)

At the present time, MRI has clinical application most clearly in diagnosing disease in the brain, brain stem and spine, which currently account for approximately 70-80% of the clinical scans being performed. An increasing number of clinical applications are being developed for other body organs such as the circulatory system, the liver, and the musculo-skeletal system. The number of clinical situations in which MRI will replace current diagnostic methods is expected to continue to grow at a rapid pace.

MRI has significance for the treatment of disease not only because the images often result in earlier and/or better diagnosis of disease, but because it does so without exposing the patient to the radiation involved in conventional x-rays and CT scans. This allows physicians to do repeated scans on a patient to follow the course of disease, or to monitor the effects of treatment. It allows scans of patients, such as children and pregnant women who physicians are especially reluctant to expose to radiation. MRI may offer increased patient safety also, because it may greatly reduce the need for current invasive techniques such as angiography, myelograms or exploratory surgery which are accompanied by some increased risk to the patient.

In terms of cost, MRI is a very expensive technology. The cost of a scan is currently three to four times the cost of a CT scan. General estimates of costs taken from recently approved DoN applications are between $300 and $450 per scan. Cost savings may be realized however, through eliminating hospitalizations associated with other diagnostic procedures, such as angiography or exploratory surgery, and through savings associated with the earlier and more accurate diagnosis of disease, and the subsequent avoidance of more costly treatment modalities.

II. BACKGROUND (cont.)

Third party payors have been cautious in reimbursement of MRI. The federal government is expected to announce this fall its policy which will allow Medicare reimbursement for head and spine imaging. Blue Cross of Massachusetts has developed a rate for reimbursement of hospitals for brain, brain stem and spinal cord scans. Some private insurers have also set a reimbursement rate for MRI. Nationally, this caution has resulted in a situation where some early providers are losing money, as revenue shortfalls have amounted to 40% of projected revenue. As more third party payors set rates, this situation is expected to improve.

Because the proliferation of new technology, no matter how valuable, is expensive, and in the absence of a generally accepted need methodology for the distribution of the MRI, the current guidelines took the approach of recommending eight initial units for approval. These were distributed geographically with four of those units in HSA IV, and the remaining four distributed throughout the remaining health service areas (HSA's) of the State. By the spring of 1985, hospitals and physicians had petitioned the State to consider a revision of the MRI guidelines in advance of the original revision date, which was May of 1986. The medical community argued that the growth of MRI applications had proceeded more rapidly than anyone could have anticipated, and that therefore the methodology should be more widely available to Massachusetts residents. The Executive Office of Human Services and the Department of Public Health examined these arguments and later determined to review the present guidelines by the end of 1985.

These updated guidelines consider the need, quality and cost issues that should be addressed by any applicant proposing the operation of an MRI service, either in a hospital or in a freestanding MRI facility.

III. DEVELOPMENT OF A NEED METHODOLOGY

A primary focus of the MRI Technical Advisory Committee was the development of a need methodology to be incorporated into the revised guidelines which would both predict more accurately the statewide need for MRI services, and form a basis whereby each individual applicant could justify need for the proposed service. The Committee found that there was no generally accepted methodology which would meet both of these goals. Discussion focused primarily on a methodology developed by the American Hospital Association, because it was the furthest along in development. The AHA methodology, based on over 300 ICD-9 diagnostic categories, predicted the need for MRI scans by estimating the percentage of patients in each category who could benefit from such scans. The estimates were provided by five physicians selected by AHA who were experienced in MRI procedures. Two alternate weighting systems were developed by the AHA based on the physicians responses, and an additional "step up" factor, derived from the Leonard CT methodology, added to account for follow-up scans.

The MRI Advisory Committee recognized the limitations of the AHA methodology, which presented some identifiable concerns. The methodology might tend to underestimate the actual need for scans because no provisions were made for estimating outpatient scans, or for scans that were done for screening purposes (i.e., those that eliminated diagnosis). Further, the AHA physicians completed their review two years ago. On the other hand, the methodology might also overestimate scans needed because the AHA survey asked the question "what procedures might be done on MRI" and did not focus on the question of what procedures could only, or better be done by MRI scans, to the exclusion of other diagnostic procedures. Further, the AHA factor that would allow for follow-up scans was significant, and might incorporate projections of outpatient scans.

III. DEVELOPMENT OF A NEED METHODOLOGY (cont.)

On balance, the Committee determined that the AHA survey, while not providing a perfect need methodology, provided a basis for estimating future demand for MRI services in the state, and provided a basis for individual applicants to justify the need for MRI services.

A rough estimate of the number of scans predicted by the AHA model, applied to Massachusetts aggregate data, results in a range of 50,000 to 85,000 scans needed (See Attachment 4). Assuming 2,500 scans per year on each machine (a conservative estimate), the range of machines which could be utilized statewide in Massachusetts is between 20 and 35 machines.

Faced with this estimate, the new guidelines take the approach of planning for new units on an incremental basis, with 9 additional units (in addition to the original 8 units) recommended for the next planning period. This incremental approach was developed with the following policy factors in mind:

- the high cost of acquiring new technology;
- the growing number of new clinical applications for MRI imaging;
- the changing reimbursement environment;
- the importance of adequately staffing facilities;
- the need to acquire data on the substitution effect of MRI vis a vis other diagnostic procedures (e.g., CT scanning); and
- the opportunity to review changes in MRI technology which might shed light on technical issues such as the optimum size of magnetic field strengths.

III. DEVELOPMENT OF A NEED METHODOLOGY (cont.)

The Advisory Committee has indicated its desire to continue to meet to work on the development of a more complete need methodology. As part of its task the Committee will recommend a specific target date for the end of the second phase of planning. Until then, nine additional units will be a target goal for DoN review of applications.

IV. FACTORS FOR REVIEW

The following are the factors, based on the DoN Regulations, which will be considered in the review process.

FACTOR ONE: HEALTH PLANNING PROCESS

STANDARD: PLANNING FOR MRI SERVICES WILL BE CONDUCTED WITH REASONABLE CONSULTATION AND INPUT FROM OTHER PROVIDERS AND THOSE OTHERWISE AFFECTED BY THE PLANNED PROJECT.

MEASURE 1: The applicant will describe contacts with other hospitals and physicians concerning utilization of the MRI unit, as well as with local and state planning agencies. The description should include the date of each contact, the nature of each meeting, and the conclusion drawn.

MEASURE 2: In the case of hospitals, plans for an MRI unit should appear in the hospital's One and Five Year Plan. In the case of consortia of hospitals, plans for an MRI unit should appear in at least one hospital's One and Five Year Plan.

FACTOR TWO: HEALTH CARE REQUIREMENTS (cont.)

MEASURE 4: Other data may be presented to supplement the general need analysis required in Measure 3, above, by applicants proposing to serve special populations (e.g., mental disorders, or children).

MEASURE 5: Institutions who agree to have their patient populations included as part of the data base (needs assessment) for an MRI application, must agree in writing to remain part of that patient referral base for a period of at least two years from the date a DoN is approved. Such institutions may not file a DoN application for an individual unit or as part of another consortia for this period.

MEASURE 6: In reviewing applications, preference will be given to those applications demonstrating multi-institutional arrangements for referrals, as reflected in written agreements, that would result in a broader patient base.

MEASURE 7: In reviewing applications, special consideration will be given to those teaching hospitals which are involved with significant MRI research, and are seeking their first clinical unit.

Discussion: The Department has utilized the estimates generated by the AHA model as a basis for estimating demand for MRI services, and the need for additional units. At present, the Department believes that this methodology also provides the best available model for individual applicants to estimate need.

Discussion: (cont.)

The decision to locate at least four of the additional MRI units in HSA IV was based on the fact that 42% of all patient discharges are located in HSA IV, and patient referral patterns often result in difficult diagnostic problems being referred to that HSA. The distribution of at least 4 remaining units in other HSA's ensure reasonable geographic access to patients throughout the state to this new technology.

Distribution of this new technology between teaching hospitals and community based facilities recognizes the appropriateness of providing clinical services in both of these settings. The additional consideration given teaching hospitals operating their first clinical unit recognizes the role those institutions play both in developing new applications of MRI technology, and in disseminating that information to physicians and other health care professionals throughout the state.

FACTOR 3: OPERATIONAL OBJECTIVES/INSTITUTIONAL CHARACTERISTICS

STANDARD: MRI SERVICES WILL BE STAFFED TO ENSURE QUALITY OF CARE AND EFFICIENT USE OF RESOURCES

MEASURE 1: The applicant must demonstrate the presence on site of a physician who will bear primary responsibility for the clinical operation of the facility, and for the screening of patients. Such physician(s) must be on site at all times patients are undergoing scans. Qualifications for this physician are as follows:

a) a board certified or board eligible radiologist, who can meet the eligibility criteria for senior membership in the American Society of Neuroradiology, and can demonstrate at least six months in-depth experience in MRI;

FACTOR THREE: OPERATIONAL OBJECTIVES/INSTITUTIONAL CHARACTERISTICS (cont.)

b) in the case of facilities planning to do more than 60% of its scans in other than the head and spine, radiologists with experience in cross sectional imaging of other parts of the body and at least six months in-depth experience in MRI's should be substituted;

c) applicants may submit the qualifications of physicians other than radiologists for review by Staff, if that physician has demonstrated experience in a variety of diagnostic imaging modalities and six months in-depth experience in MRI, as well as knowledge in the appropriate area of cross sectional anatomy, physiology and physics; and

d) the curriculum vitae (without publications) of the individual(s) shall be submitted at the time of application.

MEASURE 2: The applicant shall discuss the proposed staffing pattern of the unit, and shall include provisions for data collection, for obtaining the services of physicist as needed, and for providing adequate technical and patient support during scan times.

STANDARD: OTHER SUPPORT SERVICES SHALL BE AVAILABLE TO ENSURE THE PROGRAM'S CAPABILITY TO MAKE A DIAGNOSIS IN THE MOST EFFICIENT AND EFFECTIVE MANNER POSSIBLE.

MEASURE 1: CT scanning, nuclear medicine, ultrasound and angiography capability must be available on site, through member hospitals in the case of consortia, or through signed referral agreements with other area institutions.

FACTOR THREE: OPERATIONAL OBJECTIVES INSTITUIONAL CHARACTERISTICS (cont.)

MEASURE 2: Applicants must demonstrate full time availability of board certified or board eligible neurologists, neurosurgeons, oncologists and cardiologists. Hospital applicants and consortia of hospitals should indicate the staff status of these physicians (i.e., active, provisional, courtesy). Other applicants should include formal written commitments of participation from these specialists.

MEASURE 3: All MRI applicants shall describe their proposed utilization review procedures which shall include review of clinical protocols, review of appropriateness and quality of clinical scans, and evaluation activities as outlined in Measure 4 below. Utilization review teams shall include at a minimum:

a) representatives from at least two other specialties other than radiology; (e.g., cardiology, neurology, oncology);

b) a physician representative from outside the sponsoring facility, if not represented by (1) above;

c) in the case of non-teaching hospitals, an additional representative from teaching hospital engaged in or knowledgable about MRI research activities; and

d) in the case of teaching hospitals, an additional representative from a non-teaching hospital involved in providing MRI services.

MEASURE 4: Applicants must submit signed referral agreements with other area institutions which ensure equal access of all patients to be served by the MRI unit. Applicants must state their intention to schedule patients based on clinical protocols, and must state that ability to pay will not be considered in the acceptance of patients for scans.

FACTOR THREE: OPERATIONAL OBJECTIVES/INSTITUTIONAL CHARACTERISTICS (cont.)

MEASURE 5: All MRI applicants must agree to participate in the Department's data collection efforts. These may include evaluation of the clinical effectiveness, cost and substitution effect of MRI.

STANDARD: MRI DEVICES MUST BE PROVEN SAFE AND EFFECTIVE FOR CLINICAL USE.

MEASURE 1: Applicants shall identify magnet type and field strength at time of application. Applicants must agree to purchase only those magnets which have pre-market approval from the Food and Drug Administration prior to DoN approval.

MEASURE 2: Applicants proposing mobile technology which has received pre-market approval from the FDA must satisfy concerns regarding the safety of transporting the equipment, physical accessibility of non-ambulatory patients, and environmental concerns (e.g., noise level, hours of transportation, etc.)

STANDARD: ALL MRI UNITS SHALL BE STAFFED TO PERFORM A MINIMUM OF 2,500 CLINICAL SCANS ANNUALLY.

MEASURE 1: MRI facilities should be operational on an average of ten hours a day, five days a week. Throughput of patients should be estimated at one per hour. Two weeks of downtime are estimated per year. Applicants may submit other schedules for clinical times of operation that meet the minimum requirements of 2,500 clinical scans per year.

STANDARD: ALL MRI UNITS SHALL DEVELOP AND DESCRIBE TRAINING AND EDUCATION PLANS.

MEASURE 1: Applicants must develop and describe plans for education and training of technicians and nurses staffing the unit.

FACTOR THREE: OPERATIONAL OBJECTIVES/INSTITUTIONAL CHARACTERISTICS (cont.)

MEASURE 2: Applicants are required to offer educational opportunities for area radiologists and other physicians or clinical investigators to become familiar with the general applications of MRI. Applicants must describe such plans.

Discussion: The operational objectives of an MRI project are that the facility will provide quality MRI scans to patients, and will facilitate equal access of patients without regard to ability to pay. Staffing must be appropriate and operating hours sufficient to meet projected utilization levels.

As a further goal, the operational objectives of an individual MRI unit should include participation in data collection, evaluation and educational activities which further the general knowledge about MRI application effects related to other existing diagnostic modalities.

FACTOR FOUR: STANDARDS COMPLIANCE

STANDARD: RENOVATIONS OR NEW CONSTRUCTION ASSOCIATED WITH ALL MRI PROJECTS WILL MEET ALL RELEVANT CONSTRUCTION STANDARDS INCLUDING SHIELDING REQUIREMENTS OF THE MANUFACTURER OR THE DEPARTMENT OF PUBLIC HEALTH.

MEASURE 1: Schematic drawings shall be submitted for all renovation or new construction associated with this project.

MEASURE 2: The scope of renovations or new construction shall be presented and discussed.

MEASURE 3: Applicants shall meet the requirements of the Radiation Control Program of the Department of Public He :h (Attachment 3).

FACTOR FIVE: FINANCIAL FEASIBILITY AND CAPABILITY

STANDARD: THE MRI PROJECT SHALL BE WITHIN THE FINANCIAL CAPABILITY OF THE APPLICANT.

MEASURE 1: Applicants shall disclose all sources of revenue applicable to this project that may be available, including any revenue which may come from manufacturers or from research activities, as well as from third party payors. The number of projected scans by payor should also be provided.

MEASURE 2: Applicants shall specifically make provisions for free care of patients requiring MRI scans, and shall discuss those provisions in this application.

MEASURE 3: Applicants should be prepared to make a 30% equity contribution toward the cost of the proposed project.

Discussion: Schedules A through H of the DoN application and other supportive material should demonstrate that the applicant's financial position is strong enough to take on the proposed project. Since the reimbursement environment is unsure, applicants should discuss specific reimbursement assumptions and alternative financial plans.

FACTOR SIX: REASONABLENESS OF EXPENDITURES AND COSTS

STANDARD: MRI SERVICES WILL BE DESIGNED TO ENSURE AN ACCEPTABLE QUALITY OF SERVICE DELIVERY AND WILL BE CONSTRUCTED AND OPERATED AT THE LOWEST REASONABLE COST.

MEASURE 1: The applicant shall discuss how the capital cost estimates presented in the application were derived. The applicant shall discuss size, type and manufacturer of the MRI unit it expects to purchase, siting concerns, and all related costs.

FACTOR SIX: REASONABLENESS OF EXPENDITURES AND COSTS (cont.)

MEASURE 2: The applicant shall discuss how the operating cost estimates presented in the application were derived. Applicants shall submit operating cost estimates based on the number of clinical scans proposed.

MEASURE 3: Applicants shall demonstrate any cost savings, including substitution for other diagnostic modalities which may accrue to its institution(s) as a result of the operation of the MRI unit.

MEASURE 4: In the case of competing applications, Staff will consider lowest cost including cost savings, as an important consideration in review.

Discussion: The Department wants to ensure that applicants have thoroughly researched all the alternatives for providing the MRI service and that the project proposed represents a reasonable patient expenditure for the service. In determining reasonableness of costs, Staff will use previously approved projects and the following information as a guide:

A. Capital Costs

1. Cost of new construction for a freestanding MRI facility should not exceed an average of $150/gsf, including architectural fees and soil and site preparation. Construction of partial space (e.g., to house only the MRI unit itself) may be higher;

2. Construction of a freestanding MRI facility should not exceed 4,500 gsf;

3. Applicants must present justifications for exceeding the above guidelines which will be reviewed on a case by case basis by the DoN staff.

4. Applicants must describe the size and type of magnet being purchased; applicants wishing to purchase magnets with field strengths larger than 1 T must submit justifications for such purchases;

FACTOR SIX: REASONABLENESS OF EXPENDITURES AND COSTS (cont.)

B. Operating Costs

Operating costs for MRI facilities performing 2,500 scans per year have averaged $1 million annually. In calculating operating costs, applicants should indicate the cost of cryogens and the maintenance contract for the unit itself. Staffing will vary from project to project but each applicant must meet the staffing requirements outlined in Factor 3, above.

FACTOR SEVEN: RELATIVE MERIT

STANDARD: THE MRI SERVICE AS PRESENTED IN THE PROJECT PROPOSAL WILL BE SUPERIOR, ON BALANCE, TO ALTERNATIVE AND SUBSTITUTE MEANS FOR MEETING PROJECTED NEED.

MEASURE 1: The applicant will present the options considered before choosing this proposal, reviewing them from the perspective of cost, quality, efficiency and patient access.

FACTOR EIGHT: ENVIRONMENT IMPACT

In most instances no environmental notification form or report is required, since it is exempt under Code 301 Massachusetts Regulation 10.32 promulgated by Executive Office of Environmental Affairs pursuant to Massachusetts General Laws Chapter 30, Sections 61-62H.

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ATTACHMENT 2

MASSACHUSETTS

Proposed Distribution of MRI Units

	1st Planning Phase	2nd Planning Phase	Total
HSA I	1	1	2
HSA II	1	1	2
HSA III, VI	1	1	2
HSA IV	4	4	8
HSA V	1	1	2
Distributed at discretion of DoN	—	1	1
TOTAL	8	9	17

AHA EXPERT PANEL METHODOLOGY
PATIENT UTILIZATION BY PERCENT

Major ICD-9-CM Groupings	National No. of Patients (Thousands)	* Core Population (GENAVG)	Total Utilization with Follow-up	* Core Population (HCAVG)	Total Utilization with Follow-up
Infectious & Parasitic Diseases (001-139)	695	5.58%	6.42%	6.25%	7.17%
Neoplasms (140-239)	2594	21.89%	52.74%	20.93%	51.90%
Endocrine, Nutritional & Metabolic Diseases & Immunity Disorders (240-279)	1161	0.44%	0.50%	0.00%	0.00%
Diseases of the Blood & Blood Forming Organs (280-289)	367	0.00%	0.00%	0.00%	0.00%
Mental Disorders (290-319)	1746	4.84%	6.05%	0.11%	0.13%
Diseases of the Nervous System & Sense Organs (320-389)	1828	11.98%	14.96%	11.46%	14.37%
Diseases of the Circulatory System (390-459)	5488	14.49%	17.30%	15.29%	18.59%
Diseases of the Respiratory System (460-519)	3459	0.01%	0.02%	0.00%	0.00%
Diseases of the Digestive System (520-579)	4628	0.08%	0.09%	0.00%	0.00%
Diseases of the Genitourinary System (580-629)	3411	3.76%	4.33%	0.00%	0.00%
630-709 0					
Diseases of the Musculo-skeletal System and Connective Tissue (710-739)	2377	7.48%	8.61%	7.78%	8.90%
Congenital Anomalies (740-759)	335	7.93%	9.12%	1.99%	2.30%
Certain Conditions Originating in the Perinatal Period (760-779)	166	0.48%	0.55%	0.00%	0.00%
Symptoms, Signs and Ill-Defined Conditions (780-799)	624	2.04%	2.55%	0.00%	0.00%
Injury and Poisoning (800-999)	3568	0.73%	0.89%	0.56%	0.70%
Total	32447	2086.8 (6.43%)	3183.6 (9.81%)	1848.4 (5.7%)	2925.5 (9.02%)
Massachusetts admissions (1983)	875,000	56,275	85,852	49,846	78,892
MRI Units (2,500 scans/unit)		22.5	34.3	19.9	31.6

*Alternate weighing systems developed by AHA

AHA Hospital Technology Series (ISSN 0735-4681) includes Executive Briefing, Technology Scanner, and Guideline Report

APPENDIX A

APPROPRIATENESS REVIEW STANDARDS FOR 83-16 NEONATAL SPECIAL CARE SERVICES

Pursuant to the authority vested in the State Hospital Review and Planning Council by Sections 2803, 2901 and 2904 of the Public Health Law, Part 708 of Article 1 of Subchapter C (State Hospital Code) of Chapter V (Medical Facilities) of Title 10 (Health) of the Official Compilation of Codes, Rules and Regulations of the State of New York is hereby amended, subject to the approval of the Commissioner, to be effective upon filing with the Secretary of State, as hereinafter indicated:

Section 708.2(b) is hereby amended to add new paragraph (6) to read as follows:

708.2(b)(6)(i) Neonatal special care is one aspect of perinatal medicine. Neonatal special care is defined as that care provided to infants who require highly specialized forms of care. This care is provided in a facility having the capability, equipment and personnel to provide those highly skilled treatment measures required by such infants.

(ii) Neonatal special care is divided into three levels of care:

(a) Intensive care units provide constant nursing and continuous cardiopulmonary and other support for severely ill infants.

(b) Intermediate care units provide care for sick neonates who do not require intensive care but require 6-8 nursing hours each day.

(c) Continuing care units provide care for low birthweight neonates who are not sick but require frequent feeding and neonates who no longer require intermediate care but still require more hours of nursing than do normal neonates.

Section 708.5 is hereby amended to add a new subdivision (f) to read as follows" 708.5(f) Neonatal special care services.

(1) The standards of Chapter V of this Title shall be applicable to the extent that such standards relate to the service under review or to the physical location in which the service is being provided.

(2) The following general standards address the distribution of services and issues related to all hospitals which provide neonatal special care services:

(i) The travel time to reach an intensive care unit is optimally two hours.

(ii) All hospitals shall have written transfer agreements in place for the transfer of newborn infants who need intensive or intermediate care not available at the hospital of admission. Transfer agreements shall be mutually agreed upon by both the transferring hospital and the receiving hospital and shall be reviewed on an annual basis.

(iii) Intensive care beds shall not exceed 1 per 1,000 live births. This standard is based on a prematurity rate of 80/1000 births and may be adjusted for the actual prematurity rate in a region.

(iv) Intermediate care beds shall not exceed 3-4 per 1,000 live births. This standard is based on a prematurity rate of 80/1000 births and may be adjusted for the actual prematurity rate in a region.

(v) Continuing care beds shall not exceed 2 per 1,000 live births. This standard is based on a prematurity rate of 80/1000 live births and may be adjusted for the actual prematurity rate in a region.

(vi) A neonatal special care unit shall have a minimum average annual occupancy rate of 75 percent.

(vii) All hospitals shall participate in a regional system of communication, consultation and transport. All hospitals shall have written guidelines for determining the basis for seeking consultation when necessary and arranging transport of pregnant women and newborns. These guidelines shall be reviewed by each hospital at least every 5 years.

(ix) The intensive care nurse-to-patient ratio shall be 1:1-2.

(x) The intermediate care nurse-to-patient ratio shall be 1:3-4.

(xi) The continuing care nurse-to-patient ratio shall be 1:4.

(3) The following standards apply solely to the regional center, which shall mean a facility or those facilities serving a given health systems agency region which provide all aspects of neonatal care and whose functions, and responsibilities, also include education, evaluation and research, and data collection within that region:

(i) There shall be a full-time Chief of Neonatal Pediatrics who is certified by the American Board of Pediatrics Subspecialty Board of Neonatal-Perinatal Medicine, or has the equivalent of such training and experience required for certification.

(ii) There shall be one neonatologist for every 6 to 10 patients in the continuing, intermediate and intensive care areas.

(iii) There shall be one neonatal nurse clinician or one resident or fellow for every 4 or 5 patients who require intensive care. A minimum of 50 percent must be a resident or fellow.

(iv) The supervision of nurses in the neonatal special care unit shall be under the direction of a nurse with master's degree-level training in neonatal nursing and either Certification in neonatal nursing by the Nurse's Association of the American College of Obstetricians and Gynecologists or the equivalent of such training and experience required for certification.

(v) The nurses in the neonatal special care unit shall be Registered Nurse's who have completed a minimum of six weeks of orientation before assuming direct patient care responsibility.

(vi) Each regional center shall have social work services provided by a social worker with a Master's Degree in Social Work who is specifically assigned to the neonatal special care services.

(vii) Regional centers shall provide all aspects of neonatal care, including intensive care and a broad range of onsite continuously available, subspecialty consultation: renal function, metabolism, cardiology, general pediatric surgery, endocrinology, gastroenterology-nutrition, genetics, hematology, infectious disease, neurology, anesthesiology, pediatric radiology, pulmonary medicine, psychiatry, immunology and pharmacology. Pediatric surgical subspecialists, e.g., cardiovascular surgeons, plastic surgeons and neurosurgeons as well as orthopedic, ophthalmologic, urologic and ear, nose and throat surgeons shall be available for consultation and care. A pathologist with special competence in neonatal disease shall be a member of the hospital staff.

(viii) Laboratory and x-ray technicians shall be available in the hospital on a 24-hour a day basis. The laboratory shall be able to provide blood gases 24-hours a day.

(ix) Regional centers shall have 24-hour consultation services available for other hospitals in the region.

(x) A regional center, or regional centers in cooperation with one another in the case of regions with more than one center, shall develop and implement, with the support of hospitals in the region, programs of continuing or refresher education throughout the region.

(xi) Regional centers shall have a policy to encourage the back transfer of babies to hospitals in the region for the purpose of continuing care. There shall be mutual agreement between a regional center and other hospitals in the region that, where appropriate, infants may be transferred from the regional center for recovery care.

(xii) Regional centers shall contain a minimum of 25 intensive/intermediate/continuing care beds. Existing providers that otherwise meet all of the requirements of a regional center, except for the minimum bed capcity, shall qualify for designation as a regional center.

(xiii) Regional centers shall have the capacility of initiating a transport to a referral hospital within 30 minutes of the incoming call.

(xiv) Regional centers shall provide all aspects of neonatal care. In addition, other functions of a regional center shall be: education, evaluation of patient outcome and research and data collection for the region.

(xv) A regional center shall serve an area with no less than 8,000 births.

(4) The following standards apply to those non-regional center hospitals which provide neonatal intensive care services:

(i) A neonatal intensive care or intensive and intermediate care unit other than a regional center shall contain a minimum of 15 beds, with a minimum of 5 of these beds as intensive care beds. Existing providers that otherwise meet all of the requirements for a neonatal intensive care unit except for the minimum bed capacity shall qualify for designation as a neonatal intensive care unit.

(ii) A hospital which provides neonatal intensive care shall participate in the support program of continuing and/or refresher education provided by a regional center.

(iii) Laboratory and x-ray technicians shall be available in the hospital on a 24-hour a day basis. The laboratory shall be able to provide blood gases 24-hours a day.

(iv) The neonatal intensive care unit shall be under the direction of full-time pediatrician who is either certified by the American Board of Pediatrics and has sub-specialty certification by the Board of Neonatal-Perinatal Medicine, or has the equivalent of such training and experience required for certification.

(v) There shall be one neonatologist for every 6 to 10 patients in continuing, intermediate and intensive care areas.

(vi) The supervisor of neonatal nursing services in hospitals providing neonatal intensive care shall have advanced training and either certification in neonatal nursing care by the Nurse's Association of the American College of Obstetricians and Gynecologist, or the equivalent of such training and experience required for certification.

(vii) The nurses in the neonatal intensive care unit shall be R.N.'s who have completed a minimum of six weeks of orientation before assuming direct patient care responsibility.

(viii) Each hospital providing neonatal intensive care shall have social work services provided by a social worker with a Master's Degree in Social Work who is specifically assigned to the neonatal intensive care service.

(ix) A hospital with a neonatal intensive care unit shall have a mutually acceptable written agreement with a regional center which specifies the scope of subspecialty services to be offered in that unit. As a minimum this scope of service shall include pediatric cardiology and pediatric neurology. This agreement shall have written guidelines for dealing with cases not within the unit's scope of service.

(5) The following standards apply to those non-regional center hospitals which provide neonatal intermediate care, but not intensive care:

(i) A neonatal intermediate care unit shall contain a minimum of 10 beds. This number may be adjusted based on considerations of accessibility, geography, and population density.

(ii) A hospital which provides neonatal intermediate care shall participate in the support programs of continuing and/or refresher education provided by a regional center.

(iii) Laboratory and x-ray technicians shall be available in the hospital on a 24-hour a day basis. The laboratory shall be able to provide blood gases 24-hours a day.

(iv) The neonatal intermediate care unit shall be under the direction of a full-time pediatrician who is either certified by the American Board of Pediatrics and has sub-specialty certification by the Board of Neonatal-Perinatal Medicine, or has the equivalent of such training and experience required for certification.

(v) A registered nurse with either certification in neonatal nursing by the Nurses Association of the American College of Obstetricians and Gynecologists or the equivalent of such training and experience to be eligible for certification, shall be solely responsible for the supervision of neonatal nursing in the neonatal intensive care areas.

(vi) Each hospital providing neonatal intermediate care shall have social work services provided by a social worker with a Master's Degree in Social Work who is assigned to the Department of Pediatrics.

(vii) A hospital with a neonatal intermediate care unit shall have a mutually acceptable written agreement with the regional center which specifies the scope of subspecialty service to be offered in the unit. This arrangement shall specify the protocols for dealing with cases not within the unit's scope of service.

Definitions and Standards

for the

Appropriateness Review of Burn Care Services

708.2 (b)(2)(i) Burn care services is that care provided to burn patients in a facility having the capability, equipment and personnel to provide those highly skilled treatment measures required by such victims. Three degrees of burn injury are identified to define the level of treatment;

(a) major burn injury: at least a second degree burn requiring hospitalization of the patient whose chances of survival are less than 95% or whose injury frequently results in disability. A 95% chance of survival can generally be described as a second degree burn of greater than 25% total body surface area (TBSA) in persons between the ages of 15 and 35 years, and greater than 20% TBSA in children younger than 15 years and adults between 35 and 60 years of age, and all burns involving poor risk patients, that is anyone older than 60 years and anyone with a positive history of chronic and severe illness. Also included in this category are all third degree burns of 10% TBSA or greater, all burns significantly involving the hands, face, eyes, ears, feet or perineum, all circumferential burns, all serious inhalation injuries, and all electrical burns and complicated burn injuries involving fractures or other major trauma.

(b) moderate uncomplicated burn injury: a burn injury requiring hospitalization and generally described as a second degree burn of less than 25% TBSA but more than 15% in persons between the ages of 15 and 35 years, and between 10% and 20% in children younger than 15 years and in adults between 35 and 60 years of age, and third degree burns of less than 10% TBSA but more than 2%. Excluded from this category are all poor risk patients, that is, anyone older than 60 years and anyone with a positive history of chronic and severe illness, all burns significantly involving the eyes, ears, face, hands, feet or perineum, all circumferential burns, all serious inhalation injuries, and all electrical burns and complicated burn injuries involving fractures or other major trauma.

(c) minor burn injury: second degree burns of less than 15% TBSA in persons between the ages of 15 and 35, and less than 10% TBSA in children younger than 15 years and in adults between 35 and 60 years of age and third degree burns of less than 2% TBSA. Excluded from this category are all poor risk patients, that is, anyone older than 60 years and anyone with a positive history of chronic and severe illness, all burns significantly involving the eyes, ears, face, hands, feet or perineum, all circumferential burns, all serious inhalation injuries, and all electrical burns and complicated burn injuries involving fractures or other major trauma.

(ii) Burn care takes place in the following treatment settings:

(a) Burn Unit/Center:	a facility with a discrete intensive care unit, dedicated beds, highly skilled staff and equipment and which treats major burn victims.
(b) Burn Program:	a facility with the trained personnel and equipment to provide complete care of moderate uncomplicated burn injuries including rehabilitation.
(c) Hospital Emergency Room:	a facility treating minor burn injuries and providing emergency care for modera and major burn injuries until appropria referral transfer can take place.

A new subdivision (b) of section 708.5 is added to read as follows:

(b) Burns Care Services

(1) All services

(i) The standards of Chapter V of this Title shall be applicable to the extent that such standards relate to the service under review or to the physical location in which the service is being provided.

(ii) Every hospital has and follows a prescribed protocol for burn triage, emergency burn care, and referral. The protocol includes a minimum:

(a) the Lund-Browder chart or a similar chart for estimating total body surface area.

(b) a provision that major burn injury is to be treated, to the extent possible, in a burn unit/center except for emergency care prior to referral to such a unit/center.

(c) a provision that moderate uncomplicated burn injury is to be treated, to the extent possible, in a burn program or burn unit/center.

(iii) The burn unit/center is responsible for training facility and other personnel within the service area on emergency treatment procedures, assessment of total body surface area affected, and the classification of burn and triage protocols.

(iv) A burn service is provided by a financially viable facility.

(v) Reviews of each patient with major burn injury or moderate uncomplicated burn injury are undertaken on a weekly basis by the burn care team.

(2) Burn Unit/Center

(i) Each burn unit/center has a minimum of six (6) beds.

(ii) Each burn unit/center treats a minimum of fifty (50) patients with major burn injury to moderate uncomplicated burn injury per year.

(iii) The burn unit/center refers patients for whom there are no available beds to another burn unit/center which can provide the care needed.

(iv) The three (3) year average occupancy of a burn unit/center is at least seventy-five (75) percent.

(v) There is no more than one burn unit/center bed for every 225,000 in population. As appropriate, the standard may be adjusted to reflect actual incidence in a health service area.

(vi) Each burn unit/center has available either through direct control or through a network of clearly identified relationships, a system of land and/or air transport which will bring severely burned victims to the unit/center.

(vii) A burn unit/center has a designated director who is: a board-certified or board-eligible general or plastic surgeon with one additional year of specialized training in burn therapy or equivalent experience in burn patient care.

(viii) Staff for the burn unit/center includes:

(a) a head nurse of the facility who is a registered nurse, with two (2) years intensive care unit or equivalent training and a minimum of six (6) months burn experience;

(b) one (1) nurse for every two (2) intensive care patients at all times;

(c) one (1) nurse for every three (3) non-intensive care patients at all times;

(d) a designated field-trained and licensed and/or registered physical therapist and occupational therapist with a minimum of three (3) months training or six (6) months experience in burn treatment available as needed;

(e) a designated registered dietician available as needed;

(f) a designated medical social worker responsible for referral and follow-up care and individual and group counseling available as needed;

(g) a psychologist and/or psychiatrist available as needed.

(xi) A burn unit/center has a designated area for providing specialized intensive care and an operating room easily accessible within the Hospital.

(3) Burn Program

(i) A burn program treats a minimum of seventy-five (75) patients with moderate uncomplicated burn injuries per year.

(ii) There is no more than one burn program for every 326,000 in population. As appropriate, the standard may be adjusted to reflect actual incidence and number of patients per program in a health service area.

(iii) The average length of stay per patient in a burn program is no more than fourteen (14) days.

(iv) Staff for a facility with a burn program includes:

(a) a board-certified or board-eligible general or plastic surgeon with experience in burn care (preferably a three (3) month period of burn training) who is responsible for a written plan of burn therapy, maintains and periodically reviews the burn program's admissions and transfer protocols for burn patients having major burn injury, moderate uncomplicated burn injury, or minor burn injury;

(b) a registered nurse with six (6) months intensive care unit experience (preferably a three (3) month burn nursing experience) who is responsible for nursing care protocol for burn patients, coordination of care for in-patients requiring burn care, and training of nursing personnel involved in burn care;

(c) a licensed and/or registered occupational therapist or physical therapist with splinting experience available as needed;

(d) on staff or through formal arrangement, a medical social worker responsible for referral and follow-up and individual and group counseling available as needed;

(e) on staff or through formal arrangement, a psychologist or psychiatrist, available as needed.

(v) A burn program has these support services:

(a) general surgery;

(b) internal medicine;

(c) pediatrics;

(d) respiratory services;

(e) infectious disease control; and

(f) anesthesiology.

AMBULATORY SURGERY GUIDELINES

Background

In May 1982, the State Hospital Review and Planning Council adopted regulations for hospital-based ambulatory surgery programs which were announced to the hospitals through a Departmental memorandum in November 1982. Since that time, more than 165 hospital-based programs have been certified statewide. The regulation included a data reporting requirement for the certified centers.

Since 1982, the State has been evaluating the hospital-based programs and has concluded that the volume of procedures performed in hospital-based settings has not met expectations with fewer than 25 percent of appropriate procedures being done on an outpatient basis. In addition, many hospitals have not shifted appropriate procedures to the outpatient setting but have concentrated on performing minor or relatively low intensity procedures.

Concomitant with increase in hospital-based ambulatory surgery programs, there has been a growing interest in the development of freestanding ambulatory surgery facilities by private physicians in New York State. In June, 1985, the New York State Review and Planning Council adopted program regulations for ambulatory surgery services which included definitions of need for both freestanding and hospital-based ambulatory surgery programs.

Overview of New York State Need Methodology

The need methodology for ambulatory surgery services adopted by the New York State Hospital Review and Planning Council is included in Appendix I. In this methodology, need for freestanding ambulatory surgery programs is defined as

one new freestanding center for every 500,000 population in a health systems agency area. This population-based standard results in a need for about 34 centers statewide. In the Finger Lakes Region, this standard would result in a need for two freestanding programs. The new regulations continue the Department of Health (DOH) policy of encouraging development of hospital-based ambulatory surgery programs. See Section (1) (B) (i).

After January 1, 1987, need for additional freestanding ambulatory surgery programs will be based on an analysis of the utilization of hospital-based programs [Section (3) (a)]. Additional need for freestanding programs in a multi-hospital planning area may be found if more than 3,000 procedures considered to be appropriate for ambulatory surgery continue to be performed on an inpatient basis.

FLHSA Standards and Review Criteria

Based on the methodology to be used by the Department of Health prior to 1987, there is need for two freestanding ambulatory surgery centers in the Finger Lakes Region. FLHSA has developed the following review criteria which will be used in all reviews of Certificates of Need (CONs) for freestanding ambulatory surgery centers.

Accessibility

1. Providers of ambulatory surgery services should demonstrate a commitment to serve all patients in need, regardless of ability to pay. This would include provision of a sliding fee scale and specific commitment to accept Medicaid patients.

2. Ambulatory surgery services should be open evening and weekend hours.

3. Ambulatory surgery services should be easily accessible to the population in the planning area. If located in an urban setting the service should be accessible by public tranportation. In a rural setting the services should be within 30 minutes driving time of the population to be served.

4. Priority will be given to providers who locate ambulatory surgery services in order to increase geographic accessibility.

Efficiency

1. Providers of ambulatory surgery services must demonstrate that the type of procedures to be performed are appropriate for the service and are not procedures which are able to be performed in physician's offices.

2. Ambulatory surgery providers must demonstrate the ability to provide services with lower charges for the same procedure than for inpatient surgery.

Other Considerations

1. Priority will be given to providers who offer multi-specialty ambulatory surgery services.

2. Priority will be given to providers who locate ambulatory surgery services in a geographic area where less than 25 percent of total surgical procedures are being done on an ambulatory basis.

3. Priority will be given to sponsors who provide access to ambulatory surgical facilities to qualified community physicians.

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Pursuant to the authority vested in the State Hospital Review and Planning Council by Section 2803(2) of the Public Health Laws, Subchapter C of Chapter V, Title 10 (Health) of the Official Compilation of Codes, Rules, and Regulations of the State of New York is hereby amended, to be effective upon filing with the Secretary of State, as hereinafter indicated:

Section 709.5, Ambulatory surgery services, is hereby added to read as follows:

(a) This methodology will be utilized to evaluate certificate of need applications involving the construction or establishment of ambulatory surgery centers or services. It is the intent of the State Hospital Review and Planning Council that this methodology, when used in conjunction with the planning standards and criteria set forth in section 709.1(a) of this Part, and, in part on, the list of ambulatory surgical procedures in section 86.1.-44 of Part 86 of this Title become a statement of basic principles and planning/decision-making tools for guiding and directing the development of ambulatory surgery services and centers. The methodology is based on the application of uniform planning objectives at the health systems agency and/or state levels. Its purpose is to provide guidance, to ensure flexibility, and to assist the health systems agencies, the commissioner and potential applicants in determining the future need for health services as consistent with the certificate of need program. This methodology is also intended to promote the development of ambulatory surgery in freestanding and hospital-based programs as a cost-effective alternative to inpatient surgery where appropriate

(b) The factors and methodology for determining the public need for ambulatory surgery centers and services shall include, but not limited to:

(1)(A) Determination of need for freestanding ambulatory surgery services. In each health systems agency planning area, no more than one new freestanding ambulatory surgical center shall be approved for each 500,000 in population. Each new provider of freestanding ambulatory surgery will be required to demonstrate to the satisfaction of the commissioner that:

(i) at least 2,000 procedures appropriate for ambulatory surgery as defined by section 755.1 of this Part shall be performed at an annual rate within 18 months of approval;

(ii) at least two (2) dedicated ambulatory surgery operating rooms shall be used, each with an annual use of at least 1,000 procedures appropriate for ambulatory surgery as defined by section 755.1 of this Part;

(iii) where public need is established herein, priority consideration will be given to applicants that:

(a) improve geographic and financial accessibility to the planning area's population;

(b) improve the availability of ambulatory surgery to the planning area's population by providing evening or weekend hours of operation;

(c) where programmatically appropriate and financially feasible, provide multi-specialty surgical service to the population it intends to serve.

(B) Determination of need for hospital-based ambulatory surgery services. Each provider of hospital-based ambulatory surgery must demonstrate to the satisfaction of the commissioner that:

(i) at least 1,000 procedures appropriate for ambulatory surgery as defined by section 405.2(q) of this Title shall be performed for each dedicated ambulatory surgery operating room. If the surgical room is not used exclusively for ambulatory surgery, then a corresponding adjustment in the number of procedures expected will be made. The commissioner may waive this requirement for any hospital which has been designated a rural hospital pursuant to section 700.2(a)(21) of the Code.

(ii) where public need is established herein, priority consideration will be given to applicants that:

(a) improve geographic and financial accessibility to the planning area's population;

(b) improve the availability of ambulatory surgery to the planning area's population by providing evening or weekend hours of operation; and,

(c) propose to initiate and operate ambulatory surgery service with a total capital cost for construction of less than $300,000.

(2) Determination of need for ambulatory surgery in a health maintenace organization (HMO). Not withstanding any other paragraph in this section, the addition of ambulatory surgery services to be provided directly to an HMO enrolled population shall be approved where the HMO can demonstrate to the satisfaction of the commissioner that the provision of such services directly shall be cost-effective and accessible to the plan.

(3)(A) Determination of need for additional freestanding and hospital-based ambulatory surgery providers after January 1, 1987. After January 1, 1987, the need for freestanding and hospital-based ambulatory surgery services shall be derived as follows:

(i) the multi-hospital planning areas as defined in section 709.2(4) of this Part shall be used as the service area for determining the need for ambulatory surgery;

(ii) the total number of cases appropriate for ambulatory surgery services shall be determined by the commissioner, using a methodology based, in part, on a list of elective surgical procedures developed from such sources as the Professional Standards Review Organizations, the Peer Review Organization, major third party payors, and the Health Care Financing Administration. The list used shall be derived in part, on that used in derivation of the ambulatory surgery factor cited in section 709.2(a)(1)(ii) of this Part except as adjusted to reflect acceptable standards of medical practice. As the data from the actual provision of ambulatory surgery becomes available it will be included with the derived sub-set of inpatient surgical admissions to constitute a total number of needed ambulatory surgical procedures. The derived total number will be the need for ambulatory surgery services. The need will be: (1) calculated using the most recent complete SPARCS data and ambulatory surgery data available to the Department; and, (2) adjusted periodically to reflect changes in medical practice and technology;

(iii) the unmet need for additional ambulatory surgery will be established where a planning area has more than 3,000 inpatient cases considered appropriate for ambulatory surgery pursuant to section 709.2(a)(1)(ii) of this Part. Unmet need subsequently may be met by:

(a) the establishment of one (1) new freestanding ambulatory surgery center with two (2) dedicated ambulatory surgery operating rooms; or,

(b) the addition of new dedicated ambulatory surgery operating rooms in existing freestanding ambulatory surgery centers and/or in other existing hospital-based ambulatory surgery services; or,

(c) increased efficiency of existing freestanding ambulatory surgery centers or other hospital-based ambulatory surgery services. Such efficiency shall be assessed by the total number of appropriate ambulatory surgery procedures performed in one year. The total number of procedures shall be equal to the determined unmet need;

(iv) where public need is established herein, priority consideration will be given to applicants that meet the criteria defined in subparts 709.5(1)(A)(iii) and 709.5(1)(B)(ii) of this section.

(4) Determination of the need for single speciality ambulatory surgery providers. Such need will be derived using the methods defined in (1)(A) and (1)(B) or (3) for that service specialty, as appropriate. The total need determined for all individual specialty services will equal the total need as identified in (1)(A), and (1)(B) or (3). The commissioner may approve providers of specialty ambulatory surgery if it can be demonstrated that such single speciality service provision is more accessible than the expansion of existing providers to meet unmet need. The commissioner may waive the provisions of subparagraphs (i) and (ii) of section (1)(A).

APPENDIX H

STATE CON LAWS COVERING MAJOR MEDICAL EQUIPMENT NOT TO BE USED FOR HOSPITAL INPATIENTS

APPENDIX H

STATE CERTIFICATE OF NEED LAWS COVERING ACQUISITION OF MAJOR MEDICAL EQUIPMENT NOT TO BE USED FOR HOSPITAL INPATIENT SERVICES

STATE	EQUIPMENT THRESHOLD ($ x 000)	CON LAW	CON REGULATIONS	COVERAGE PROVISION
Colorado	1,000	25-3-5, C.R.S., 1973 (as amended May 1984)	Colorado CON Rules, October 1985.	A capital expenditure of $1,000,000 or more by any person for major medical equipment to provide "health services."
Connecticut	400	Sections 19a-155(b), C.G.S., as amended by P.A. 83-215, May 26, 1983	Sections 19-73a-1 through 19-73a-91.	"Any person" proposing to acquire or lease "imaging equipment" costing $400,000 or more must obtain a certificate of need.
District of Columbia	400	D.C. Code Sec. 32-301 et seq.	22 DCMR 4000 et seq.	Major medical equipment acquired by any person, by or on behalf of physicians, dentists, etc.
Hawaii	250 new; 400 replacement	HRS Sec. 323D (1982 Supp.)	Administrative Rules, 11-185 and 11-187 (January 9, 1981); 11-186 (June 19, 1982)	"Offices of physicians, dentists, or other practitioners of the healing arts in private practice as distinguished from organized, ambulatory health care facilities" are exempted from CON coverage except for purchase or acquisition of equipment costing more than the expenditure minimum.
Iowa	400	Iowa Code Ann., Sec. 135.61(19)(g)(1985)	IAC (470) Ch. 202	By or on behalf of an individual health care provider or a group of health care providers... in a private office or clinic.

Maryland	600	Ann. Code of Md., Sec. 19-115 and 19-1001 through 19-1008	COMAR 10.07.16	All medical equipment removed from CON effective 6/1/85. Major medical equipment is now licensed in any setting.
Mississippi	750	Sec. 41-7-191(1) and (f), MS Code of 1972, as amended		Covers "the acquisition or otherwise control of any major medical equipment" by any person.
Missouri	400	Sec. 197.315, RSMo.	13 CSR 60-3.020	The acquisition, including acquisition by lease, of any...equipment... by any person.
Montana	500	Mont. Rev. Code Ann., Sec. 50-5-301(d) (1983 Supp.)	Rule 16.32.101 (Administrative Rules of Montana, June 30, 1983)	The "acquisition by any person of major medical equipment, provided that such acquisition would have required a certificate of need ... if it had been made by or on behalf of a health care facility."
Nevada	400	NRS 439A.015		Exempts the "office of a practitioner used solely to provide routine services for health to his patients." Exemption does not apply (1) to a facility qualified to receive reimbursement as a facility from any public agency or (2) to a facility which contains or will contain medical equipment costing over $400,000.
New Hampshire	400	RSA 151-C:5:II(d)	He-C 300	Covers diagnostic and therapeutic equipment acquired by any person. Excludes replacement except when major impact on costs.
North Carolina	600	G.S. 131E-176(16)g	10 NCAC 3R .0106	Magnetic resonance imaging equipment regardless of purchaser or location.
Oregon	1,000	H.B. 2031 (1985) amending ORS 442.015 and 442.320		Major medical equipment regardless of setting except for independent clinical laboratories.

Rhode Island	150	23-15-2(k)	R23-15-CON	"Medical equipment ... proposed to be utilized by a health care provider" (physician, dentist, nurse, etc.).
Virginia	400	Sec. 32.1-102.1, 6e, Code of Virginia (1950)	Sec. 2.22.02 and 2.34.05, Va. Medical Care Facilities Certificate of Public Need Rules and Regulations, August 6, 1984	Medical equipment generally and customarily associated with the provision of health services in an inpatient setting, by or on behalf of a physician's office. If a new service or specialized clinic or center is established through use of the equipment, reviewable regardless of amount.
West Virginia	400	WV Code Sec. 16-2D-4(a)	CON Reg. §3.01 and 4.04	Private office practice of health professionals are not subject to CON except for acquisition of major medical equipment.
Wisconsin	624	1983 Sen. Bill 83, Sec. 1565w amending Wisc. Stat. Ann. 150.61(3) (1982 Supp.)	HSS 123.02	Includes independent practitioners, partnerships, unincorporated medical groups, and service corporations.
Wyoming	400 (150 for nursing care facility)	W.S. 1977 35-2-205 as amended by Enrolled Act No. 81, 1985	Rules and Regulations Governing Certificate of Need, August 7, 1985, Ch. III, Sec. 4	Licensed practitioners' offices exempt from CON except when expenditure level exceeded.