HEALTH PLANNING:
ITS PAST AND POTENTIAL

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FOREWORD

WE ARE NOW entering an era of health planning, following a relatively unchartered course which, none the less, we are depending on for progress with health problems. And there are serious problems: inadequate care for the poor, steadily increasing costs, lack of provision for care for those with long-term illness, shortages of personnel and substandard quality among others. The health field can hardly view the situation with equanimity. Indeed, these problems support the need for national effort. The public is spending large sums for medical care. The government has initiated extensive programs of financial aid such as for heart disease, cancer and stroke and for the training of health professionals. Money is not freely available but probably it is not as consequential an issue as that of trying to stimulate the present system to greater accomplishments. One way to do this is through more effective planning.

Planning, to be effective, requires understanding of the present health system, how it was developed, and the forces which have created it, followed by a study of the alternatives open for revising the system in order to wisely develop plans. Public Law No. 89-749 and "Partnership for Health" legislation providing for comprehensive health planning at state and local levels are focused on this need. The name "Partnership for Health" is consequential and should be emphasized. Problems could have been less pressing if there had been better understanding of the forces at work in the system and less tendency to conclude that it is haphazard. To assume that there has been no logic easily leads to impractical plans. Partnership in health requires planning which reflects understanding of the present system and utilizes resources which will supplement and channel the forces which created that system.

Problems in delivery of medical care exacerbated by changes in society have been developing over a period of years, and have led to a number of efforts at more orderly planning in the health field. The Hill-Burton Hospital Survey and Construction Act, passed by Congress in 1946, is a prime example of this.

This issue of *Perspectives* provides a review of the history of hospital and health facility planning up to and including the enactment of the Federal legislation for comprehensive health planning. This history brings considerable insight to this complex and important function. The appendix presents a study admittedly far from comprehensive or conclusive but, none the less, one which shows ingenuity in endeavouring to develop an approach to the evaluation of planning. The results cannot be accepted as an evaluation. None the less, review of this study is sobering. While there is obviously unfinished business in the health field which requires much more planning than has been true in the past, it is important to remember that we have little proven experience and that planning must be approached with some humility. Success in planning is not inevitable but will require wisdom and understanding for progress.

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INTRODUCTION

"So long as freedom of speech remains, there will be a babel of voices, each seeking to provide the authoritative answer to the crucial question: What is planning?"

—JOHN JEWKES
Ordeal by Planning, 1948

THERE HAVE BEEN three major landmarks in the development of the movement aimed at planning for hospitals and related health care facilities and programs on an areawide basis. The first, in 1946, was the passage of the Hospital Survey and Construction Act which provided funds for the construction of hospitals and required that the States submit plans in order to qualify for such funds. Prior to its passage, efforts in the area of planning were almost exclusively limited to individual, and frequently local, searches for solutions to the problems of availability of hospital beds and efficiency of provision of services. Passage of the Hill-Burton Act, as the Hospital Survey and Construction Act came to be called, brought these questions into the public arena.

The second landmark was the publication, in 1961, of the report of the Joint Committee of the American Hospital Association and the United States Public Health Service entitled *Areawide Planning for Hospitals and Related Health Facilities.* This report represented the culmination of several years of planning for a joint effort of the public and private sectors aimed at establishing planning as an influential, ongoing process, particularly in metropolitan areas. After the publication of this document, the movement grew rapidly. Federal money became available to support voluntary health planning agencies around the country. From a total of only nine in 1960,

the number of such agencies had, by 1967, grown to a number estimated at about 80.

The third major landmark was the passage by the Eighty-ninth Congress of Public Law 89-749. The Comprehensive Health Planning and Public Health Service Amendments of 1966, as this law is officially titled, provides for comprehensive planning for health services, health manpower, and health facilities on the state and local level. Originally enacted for two years, the act is presently being extended through 1971 with large additional appropriations authorized.

At least five ingredients must be present in order for an activity such as health planning to be successful—interest, money, public support, facts, and influence. Interest, as we shall see, was generated as long ago as the 1920's and has continued to grow, most notably in the past decade. Money in significant amounts first became available under the Hill-Burton program and the amounts available for planning as such have been increasing ever since. Public support has been forthcoming for some time, but not to the extent it now is under the Comprehensive Health Planning Act—a virtual mandate for planning. Facts necessary for adequate planning are being generated. The question of how much influence (power?) is necessary to make planning work and where this influence should be vested has not yet been resolved. The coalescence of these developments has resulted in the areawide health planning movement as we know it today and will play a major role in shaping its future.

In the course of its development both its orientations and its horizons have changed. Originally, the focus was primarily on the physical aspects of the construction of hospitals, including such concerns as bed needs and availability in the area, location and purpose of the proposed physical plant. As time went on, planners became concerned as well with health facilities other than hospitals, and with the geographic relationship of each with the others. At about this same time, there began to be some interest in organizational and functional relationships in addition to the geographic ones, although it was thought that the former should result *de facto* from the latter. Still more recently, interest was generated in the modernization of existing facilities as well as construction of new ones and the idea of "acceptable beds" evolved from the notion of "available beds." Finally, within the last few years, planners have included within their

area of activity the development of educational programs, concern for the supply of manpower, and the establishment of "comprehensive" systems for the provision of health and medical care, in addition to their previous concern for facilities for the provision of these services. The very absence of the word "facilities" from the title of this monograph indicates this widening interest.

Certainly the areawide health planning agencies which have been in existence for some time have realized significant progress in the accomplishment of their chosen programs. Some of the more recently established agencies, too, are notable for their achievements in this direction. But, on the other hand, there is no firm evidence that, in the hundred-odd metropolitan areas where no formal planning was done in 1967, the situation was any better or worse than in those which were included within the purview of a formally organized planning agency.

All too often, pronouncements for public consumption concerning areawide health planning seem to tacitly imply that, in the absence of such activities, there would be in no sense a *system* of health services—only an uncontrolled and uncontrollable accumulation of facilities and services. While many such pronouncements are probaby overstated in the interest of making the point strongly, it would seem that people involved in areawide health planning sincerely feel that, in the absence of their activities, the health services establishment would not perform as well as it does.

Thanks to philanthropy, governmental programs, and an increasing ability of local hospitals to borrow capital funds, there has been widespread construction of new facilities. Few areas of the country, and none that can be classed as metropolitan, are seriously short of hospital beds or facilities today. On the other hand, the extent of formal or informal relationships among facilities which provide for the flow of patients, material, manpower, and information through the system appears to depend in large measure upon the degree of local cooperation or competitiveness in the community and not necessarily upon the activities of a planning agency. Expenditures for medical care and the costs of providing such care are not obviously higher in areas without planning agencies. Though there is little data on the subject, there is no reason to believe that access to and utilization of facilities differs between planned and unplanned

areas. And certainly no one can assert definitely that quality of care is generally superior in areas with health planning agencies.

This is not to say that planning activities do not contribute to the efficacy of the health services establishment. At the very least, the presence of an areawide health planning agency in a community gives residents the feeling that something is being done to oversee the activities of that expensive, little-understood behemoth—a not unimportant function of all such agencies. Agencies now in operation may do much more. The issue raised in this monograph does not deal with the *value* of planning so much as with the *potential* of planning.

The idea of planning in as important an area of human endeavor as health care is so intuitively sensible and appealing that few have been led to ask such fundamental questions as "Why should we plan?" "Is planning worth the cost?" "What has planning accomplished?" and "What can we reasonably expect it to accomplish?" Yet, as we enter a period in which unprecedented amounts of money are available for planning activities and public visibility of them is increasing, it seems appropriate to pause for a look at some of these issues.

When we raise questions concerning the efficacy, costs, and impact of planning, we are operating in a realm of values as well as in a realm of objective facts. Planning has frequently been accepted as desirable for one or more of the following broad reasons:

—Intuitively it seems desirable or necessary
—People with experience in the field have encouraged it
—People in authority have advocated it

Though these methods of justification enjoy immense popularity in many fields of human endeavor, they have one undeniably serious weakness. Using any or all of these methods, it is quite possible for two people, both acting in good faith and to the best of their abilities, to arrive at different, or even antithetical, conclusions concerning the best course of action in a given situation, and there is no objective way to choose between them.

What is needed at this juncture of the development of the areawide health planning movement, and what is suggested by this monograph, is a critical look at the extent of the impact of, and the

expectations for, areawide health planning. The starting point must be a bona fide question—not a pat answer, but an hypothesis or proposition which carries a burden of proof. The result of the examination should not be a fixed, absolute answer, but a conclusion open to objective re-examination and independent testing. Until such an examination is made, we can only guess, conjecture, or assume that planning activities, as presently constituted, are worthwhile. Meanwhile, we run the costly risk that our guesses might be wrong.

The purpose of this monograph is three-fold. First, we will trace the history of the development of the areawide planning movement, since the present can best be understood in the light of the past. Second, in the course of this review, some of the external forces which impinge upon the movement and some of the basic premises on which its development are based will be examined. Finally, some of the issues which must be faced before planning activities can fully realize their purpose will be suggested. The net result will hopefully be a fuller understanding of the present state and potentials of areawide health planning.

SOME DEFINITIONS

BEFORE REVIEWING the development of the planning movement, it is necessary to define what it is we are talking about. At the risk of becoming involved in pedantry, we must start with the theory of planning itself. Depending upon one's predilections or purposes, planning can be defined as being either a static process, a dynamic process, or both. Purely static planning is in general disfavor among both practitioners and theoreticians and it will be ignored for the present purpose. When we speak of the existence of a "plan," we will mean one which exists in static form but which is reviewed and updated regularly. Good planning is clearly a dynamic process.

But its dynamism (or lack of it) is a quality independent of its scope, though these qualities are sometimes confused. In the present context, "scope" is used to mean the range of responsibilities assumed by or placed upon the planners. These responsibilities may be limited to the setting of goals, both ultimate and short-range as is true in the case of some corporate planning when a separate planning department is in existence. They may be limited to the development of alternative courses of action designed to attain exogenously predetermined goals—a more common arrangement in corporate planning in which management sets goals and planners develop programs to reach them. (It may very well be that the pre-determined goals must be supplemented by short-range, "operational" goals. These would be established by the planners.) Planning activities most frequently, however, involve both goal-setting and program development.

There is no universal agreement on the answer to the question of whether planners have any responsibility for the implementation of their plans. In most settings, planning is separate and distinct from the decision-making process necessary to alter the organization or

problems involved, perhaps additional comment is necessary. As a verb, "implement" means to effect, fulfill, or accomplish, as well as to provide the *means* for effecting, fulfilling, or accomplishing something. Implementation, therefore may mean either getting something done or doing it. This distinction is crucial.

Few would argue that actually doing that which is planned (e.g. building buildings, merging hospitals, etc.) is within the purview of the planning agency. On the other hand, many hold that a planning agency has the responsibility to the public, its sources of financial support, and its participants to use all means at its command to encourage the acceptance of its decision by the operators involved: to obtain their agreement and support. This is the first—and, for our purposes, most useful—meaning of the word "implementation". In this sense of the word, a planning agency which does not concern itself with implementation is performing less than its total function.

Only an agency which is concerned with effecting the programs it has developed need be concerned with whether or not it is doing a good job. The value of a plan, no matter how "good" it may be, which exists only on paper or in the minds of the planners is susceptible only to subjective evaluation, and each observer is entitled to his own bias, and prejudices in the evaluation process. The planner can always (subjectively) answer these criticisms and neither the evaluators nor the planners can objectively demonstrate that the plan is good or bad, realistic or impractical.

One of the characteristics of the short-range, operational goals which planning agencies identify or establish is that they are concrete. They represent "states of the world" toward which it is desirable that the system move. They represent the results which the planning agency hopes to obtain. If they are adequately stated, progress toward them can be measured. In the absence of such progress, moral and financial support for the program will soon dwindle. But, in the end, a planning agency must stand or fall on its record of *results*.

This is not to say that a planning agency should, on the one hand, be held solely responsible for the lack of success of a program because of the resistance of a few individuals or organizations; nor, on the other hand, that the planners should necessarily be given the

power to coerce the elements of the system into compliance. In our pluralistic society, the appropriate degree of responsibility lies somewhere between these extremes. Planners do have a responsibility, through encouragement and persuasion, to facilitate the implementation of a particular program, but to give them authority to enforce compliance would not only be at odds with our ordinary political tenets, it would presuppose that planning is an exact science and that the frequently intuitive judgments of planners represented immutable facts.

With these definitions and caveats in mind, let us turn to the review of the development of the areawide health planning movement.

AN HISTORICAL REVIEW

A. 1920-1945: FORMULATION OF THE CONCEPTS

IN THE YEARS which preceded the passage of the Hill-Burton Act, the forces which it consolidated followed two separate paths. One of these paths is represented by the activity in the private sector of the health services system with regard to the evaluation and inter-relationship of the existing components, particularly hospitals and hospital beds and is, in fact, the mainstream of what we today call "areawide planning." The other consists of the developments in the public sector dealing with the role of government, and especially the Federal government, with respect to the provision of health services.

The latter is well reported and documented and we shall spend little time with it except to recognize that the "proper" role of government had changed and expanded with time so that by 1946 the provision of Federal funds for hospital construction was not questioned in principle, but only in practice. The activity in the private sector is our concern in the present section of this paper. In general, the "planners" prior to 1946 had two major concerns: the first dealt with the question of whether there were enough facilities to meet the need for them, and the second with establishing coordination or interrelationships among existing facilities.

The Concept of Adequacy

It is unnecessary to chronicle the rapid, even explosive, growth in the number of hospitals and hospital beds in this country in the latter part of the nineteenth and the first two decades of the twentieth century. In 1920 there were over 6,000 hospitals, more than 30 times the number which had existed in 1880. During this period of marked growth, the location, size, and services offered by hospitals were probably in large measure determined by local preferences and

resources and were not necessarily related to the medical needs of the community involved.

In 1920, the New York Academy of Medicine conducted a study of 180 private and municipal hospitals in greater New York City for the purpose of determining whether or not there were enough hospitals to care for all the sick in the city. Their concept of need was based on a Public Health Service estimate that, at any given time, approximately two per cent of the population would be sick. The study, published in 1921, showed a total inventory of one bed per 200 persons, or one for every four sick persons. The authors concluded that this was sufficient [53:11].* This report constitutes the first formal recognition of the necessity for planning for hospital needs in the United States.

The Committee on County Hospitals of the American Hospital Association was charged, in 1926, with developing a recommendation regarding the desirable number of beds in hospitals on a national basis. The Committee reported back in 1927 [1] with a recommendation of five general hospital beds (of all kinds) per thousand population. The qualifications they placed on their recommendation are interesting in that the quantitative index is accompanied by a recognition, admittedly gross, of some of the socio-economic variables involved in its determination.

> These estimates must be regarded as suggestive only. The estimated requirement for general hospital purposes of five beds per 1,000 population is doubtless higher than would be needed in many communities where people have not been encouraged to use hospital facilities or where they have not had good opportunity to do so. The precise need in any community can be determined only by first-hand study of local needs, but we believe that few communities can offer adequate hospital care to all types of sick without maintaining the five bed per thousand population standard [1:216].

A number of other local or regional estimates followed. In 1928, the Duke Endowment published a report entitled, *The Small General Hospital* [40] which set forth requirements in terms of general and specialized beds, rather than a single overall figure. It recommended that, in addition to five general hospital beds per 1,000 population, there should be one-half bed per 1,000 population for

* This reference, and those that follow, refer to the numbered items in the Bibliography. The number following the colon, where appropriate, refers to a page number. Multiple references are separated by semicolons.

contagious diseases and for diseases of children, slightly less than one-half bed (.45) per 1,000 population for maternity care, and as many beds devoted to the care of tubercular patients as the number of average annual deaths from the disease over the previous five-year period.

In 1930, Dr. Haven Emerson proposed standards roughly similar to those of the Duke Endowment study, with the addition of a recommendation of two beds per 1,000 population for the chronically ill. He, too, recognized that variations in need among communities are conditioned by local factors when he said:

> While the use of general hospital beds in large industrial communities in the United States varies apparently according to local demand and need from three per 1,000 of the population to as much as nine, the provision of five beds per 1,000 will rarely need to be exceeded. In small towns and many rural areas not affected by serious occupational hazards or the illnesses that accompany congested housing in cities, as low a ratio as two beds per 1,000 appears to satisfy the demand [25:51].

Note that he does not mention any source of variability other than differences in medically defined need and does not mention cultural or economic variables in his statement.

Alden and Patsy Mills [35] suggested something approximating what came to be called regionalization of health services when, in their 1935 study, they delineated "hospital service centers" (areas within a 50-mile radius of cities containing more than 250 hospital beds). It was suggested that these areas contain, as a minimum, two beds per 1,000 population outside the metropolitan area. It is obvious from their mention of "scientific factors" such as density of population, number and training of physicians in the area, the suitability of home conditions for caring for less serious illnesses, etc., that they were aware of many of the factors which proximally influence need.

In the same year that the Mills' study was published, Charles Neergaard, Chairman of the American Hospital Association Committee on Hospital Planning, demonstrated an awareness of the factors influencing the use of hospital facilities when he said in his committee report to the members:

> To intelligently determine how many beds a given community needs requires that many conditions be analyzed far in advance of the first architectural sketch. There are involved considerations of the size, racial groups

and rate of growth of the population, its economic status and intelligence, the character of its housing and industries, its transient visitors and dependent districts, its present hospital facilities and to what extent they are used, its morbidity levels and the number and caliber of its medical profession [1:1935].

The concept of needed hospital beds had apparently come a long way in the fifteen years since the New York Academy of Medicine had based its recommendations on an approximation of two sick people per thousand population.

Contrast this, however, to a statement made by T. R. Ponton in an article published in 1945 [38] in which he appears to throw up his hands in dismay as he says:

> . . . the only *practical* basis of estimating the need (for general hospital beds) is to arrive at a fixed ratio to population, but unfortunately there is no accurate means of determining the ratio. It is a very variable factor. . . . The most logical method of estimating the ratio appears to be the application of the law of supply and demand [38:38].

More studies followed and, in 1945, Joseph Mountin, Elliott Pennell, and Vane Hoge developed a ratio, sanctioned by the Public Health Service, of 4.5 beds per thousand population [36]. With only slight refinement, this became the standard for the nation when the Hill-Burton legislation was passed into law. That the authors of this standard did not intend it to be absolute is clear from their report that the 4.5 figure "admittedly is a compromise between a theoretical ideal and a practical achievement." [36:6] In the Hill-Burton Law, the standards established were based upon this figure and closely related to population. In practice, rather than a standard, the number tended to be treated as a ceiling on the number of hospital beds in many states.

Since 1946, and especially since 1960, the techniques used to measure and quantify the factors relevant for determining the adequacy of the existing supply of beds or, alternatively, the number of beds needed have improved greatly. The Commission on Hospital Care proposed a "bed to death" ratio [18:289-301], but this was not adopted generally. Recently, the U.S. Public Health Service developed a method of estimating bed needs incorporating a consideration of present utilization levels. In addition, a number of economists, sociologists, statisticians, and demographers have contributed to knowledge in this area. None of these developments has produced

results generally acceptable to all, and the questions of how many beds are needed and of the two-way relationship between availability and utilization remain unanswered. It seems fair to conclude that today, even as in 1930, there is general agreement on what the relevant variables are, but little consensus on how to measure them and what influence each has upon use.

The Concept of Coordination

Despite a growing awareness of the question of the number of hospital beds required to meet the needs of the population, and some consideration of the geographical relationships of facilities, there appears to have been little accompanying interest in the problem of functional relationships prior to 1946.

Like so many of the ideas we have today, the idea of functional coordination of hospitals within a circumscribed region was first articulated in a formal way, and proposed as a national desideratum, by the Committee on the Costs of Medical Care in their *Final Report* [20]. Their finding was that the quality of health services available would be greatly improved by the creation of close working relationships among hospitals, particularly between large and small hospitals, and among physicians.

As early as 1931, the Bingham Associates Fund attempted to encourage coordination and integration of medical services for residents in rural areas of New England when a program based in the Pratt Clinic and the New England Center Hospital in Boston, and conducted in conjunction with Tufts Medical School was established [26]. It has had a long and reasonably successful history.

A very ambitious project designed to test and, indeed, implement the concept of geographical and functional coordination was started in Michigan in 1942 by the Michigan Hospital Survey Committee, jointly sponsored by the Michigan Hospital Association and the W. K. Kellogg Foundation. Its objectives were (1) to study present hospital and public health center facilities and personnel in Michigan; (2) to study population, economic, geographic, and other factors bearing upon the need for hospital service; and (3) to determine the hospital needs of Michigan and to draft a plan which would provide an adequate system of coordinating hospital and public health facilities serving all parts of the state. The studies were

made and the plan formulated by 1946 [19] with the help of the Commission on Hospital Care of the American Hospital Association.

A further effort at this sort of program, though on a smaller scale, was undertaken in Rochester, New York, in 1946. Here the goals involved the provision of educational and consultative services as well as the establishment of shared administrative services among hospitals, and less emphasis was placed on professional relationships among hospitals. Its purpose was to:

> . . . determine ways and means of making it possible for trustees, administrative personnel, nurses, and physicians on the staffs of small community hospitals to be brought into close association with an urban hospital and medical center; to offer them the same opportunities for keeping abreast that are readily at hand in the city; to bring their common problem under common scrutiny and their individual problems to the attention of persons qualified to advise and assist, with the purpose of improving the care of the nearly one million persons whom the hospitals in the region serve and stand ready to serve [23] [quoted in 33:4].

By 1946, of course, the Hospital Survey and Construction Act had become law and, in order for a state to be eligible for aid, it was required to submit a state plan predicated on the regional concept of base hospitals, intermediate hospitals, and health centers. It is not surprising that the conditional availability of these funds added great impetus to the spread of, at least, the theory of adequate regional distribution of health facilities.

Integration of the Two Concepts

Though we have treated the concepts of adequacy of hospital facilities and formally coordinated systems for the provision of health services separately for the sake of exposition, they are obviously related to one another. Given unlimited resources in the form of money, equipment, beds, and personnel (particularly, but not exclusively, physicians), total needs for health care *could* be met with no necessity for coordination or interrelationship among the facilities involved. But this would be exceedingly costly and tremendously inefficient, regardless of the standard of measurement used. Coordination of activities is likely to help reduce costs (by preventing unnecessary duplication of facilities and services) and to improve efficiency (by providing for movement of patients through the system and by sharing administrative and professional skills). Hence

the relationship: given the need for facilities, an efficient way to meet this need is through regional coordination of activities.

Statements to this effect appeared frequently after 1946. Two which provide good examples of the integration of the concepts were the report of the Commission on Hospital Care [18] in 1947, and Eli Ginzberg's book, *A Pattern for Hospital Care,* [27] in 1949.

To place the reports in context, it is important to remember that they were both issued shortly after the passage of the Hill-Burton Act (although the Report of the Commission on Hospital Care probably went to press before its passage). Thus, their emphasis on the necessity for cooperation among facilities and the need for coordinating agencies reaffirmed ideas which had already been tacitly accepted in principle by the public and the health field.

The Commission was established in 1944 under the aegis of AHA Committee on Postwar Planning. Its activities were financed by grants from the Commonwealth Fund, the W. K. Kellogg Foundation, and the National Foundation for Infantile Paralysis. Their charge was simply to conduct a two-year nationwide study of hospital care for the American people. Specifically, they set out to (1) obtain a census of present hospital and public health center facilities; (2) appraise their capacity for service; (3) establish criteria relative to physical facilities, organization and management of hospitals; (4) determine the overall need for additional facilities and service; (5) formulate a coordinated national plan for hospital service; and (6) suggest methods by which the national plan could be realized [18.4].

From their examination of the great amounts of data collected regarding the need for and supply of health facilities, they concluded (among other things) that:

> There is a growing conviction that a closer affiliation among hospitals would establish a more direct line of communication between leaders in the large medical centers and the practicing members of the profession in the outlying rural areas of the nation.
>
> American hospitals are for the most part separate and independent agencies, each endeavoring to serve the public as its controlling officers think best and as its resources permit. At the present time there is no relationship between them that could be interpreted in any way as bringing them into an organic working system [18:349].

Based on these conclusions, they recommended that:

> The need of the community and vicinity should be surveyed and

studied carefully when plans are made for a new hospital or for the enlargement or replacement of an existing institution.

The interchange of service and equipment among hospitals should be carefully considered in planning for the systematic provision of hospital care in all areas.

Hospitals should arrange for the integration of services which would make available consultation services and the part-time services of radiologists and pathologists in small institutions which individually would not be able to finance effective programs of this type on a full-time basis [18:350].

There is implied in this recommendation the necessity for a superordinate body, viewing the system as a whole, to make the decisions concerning resource allocation. This implication is made explicit in another recommendation of the Commission:

Coordinating agencies should be established to assist with the development and maintenance of relationships among the hospitals. The membership of these agencies should include representatives of the hospitals, of the medical and related professions, and of all health organizations functioning in the area [18:351].

It is interesting to note that they do not suggest a role for "consumers" in the planning process.

The report goes on to suggest that this coordination might be accomplished in several ways, including voluntary affiliations among hospitals, but that the preferred method is typified by the regional hospital council concept similar to that employed in Rochester, New York and mentioned above.

In order for this system to work, the Commission recommended the formation of regions within states coterminal with "trade areas." Within each region, hospitals would be assisted in the provision of care by "public health and medical service centers." Among these organizations, "intimate, organic relationships" would exist to provide for a "formalized means for establishing and maintaining the flow of services and patients [18:355]. The regional hospital councils would be joined into district councils which, in turn, would be members of a state hospital council. The latter would be closely affiliated with the "official state planning agency" [18:357], creating a cooperative relationship between the public and non-profit sectors of the economy.

Eli Ginzberg's book [27] reports a similar study of the nature and availability of health personnel and facilities in New York State.

He reaches much the same conclusions concerning the coordinated hospital system. His study was the result of a contract between Columbia University and the State of New York through the Joint Hospital Survey and Plannning Commission, to undertake a comprehensive study of hospital care in the state.

After discussing availability of facilities and personnel, as well as trends in costs, etc., he concludes:

Since a comprehensive system of medical and hospital care must provide treatment for patients with rare illnesses as well as for those with common complaints, provision must be made for a balanced structure which will include hospitals with a limited range of services, those with a somewhat broader range and, at the apex, the large medical center. . . . Without coordination and integration, it is probable that either too many services or too few will be provided within the region [27:332].

In addition to the programs undertaken by the Bingham Associates Fund, the Michigan Hospital Survey Committee, and the Council of Rochester Regional Hospitals, all mentioned previously, Ginzberg mentions the existence of several additional formal programs designed to functionally relate facilities one with the other [27:334–6]:

1) medical centers assuming some responsibility for staffing and for standards of care in outlying institutions through one or more of several possible arrangements. In some cases senior staff men make visits in a consultative capacity, and in some interns and residents are sent for specified periods of time.

2) post-graduate education conducted by the medical centers for the staff of the outlying hospitals.

3) training (and periodic retraining) by the medical center of technicians to staff outlying institutions through the use of traveling instructors.

Despite programs such as these, however, he concludes that the extent of coordinative activities is wholly inadequate.

Ginzberg is careful to distinguish between the "proper" role of the state government, local government, and the voluntary organizations with respect to the goals of meeting needs and coordinating activities. In general, he recommends that the state and local governments should assume responsibility for special groups within the population (e.g. ambulatory patients, mentally ill, tuberculosis patients, the aged, etc.) as well as taking responsibility for setting up a State Hospital Commission which would be concerned with:

. . . raising the quality of care, developing sound methods of determining hospital rates, and insuring that the public interest in hospital operation is furthered [27:4].

Voluntary groups, on the other hand, should:

Recognize the fact that no hospital can be self-sufficient, and act therefore to improve mechanisms such as regional hospital councils, for promoting the coordination and integration of hospitals [27:5].

Thus, as far as he is concerned, the responsibility for effective programs of regionalization rests with the voluntary groups, but if they fail to discharge this responsibility, it is proper for the State to step in and do it for them. In his words, both governmental and private groups should:

. . . take cognizance of the significant role of government in the provision of hospital care, and realize that a well-functioning and efficient hospital system for the community at large depends on the cooperation of voluntary and governmental groups working in the public interest [27:5].

Both these reports specifically mention one aspect of the question of a formally coordinated system which proved to be one of the persistent stumbling blocks in the way of achievement of the goal—that of securing the cooperation of individual physicians. The Commission on Hospital Care recommended that:

The medical profession should exert its efforts to develop the necessary medical staff cooperation required for the establishment of an effective integrated hospital system [18:358].

and Ginzberg is even more definite when he says:

The success of any system (of coordinated hospital service) depends in the first instance upon the cooperation of the local physicians, whose cooperation can be secured only if they are convinced that the plan will aid them professionally and that their economic position will not be jeopardized through loss of their more interesting and difficult cases [27:336].

It is important to recognize that both the Commission on Hospital Care and Dr. Ginzberg seem to assume that regional coordination can only be accomplished through *formal* relationships among facilities. This assumption justifies their statements to the effect that:

At the present time there is no relationship between (hospitals) that could be interpreted in any way as bringing them into an organic working system [18:349].

and

. . . the present structure of general hospitalization has developed through the uncoordinated efforts of individual institutions to meet specific local needs [27:328].

It is undoubtedly true that few formal relationships which could be viewed as forming a coordinated system existed among hospitals at that time. But one might infer from quotations such as those above that when no formal arrangement for coordination exists, the system is by definition disorganized and inefficient in the sense that individual hospitals and physicians are unable or unwilling to act in the public interest either because of provincialism or selfish motives. This seems unrealistic.

There are coherent forces which result in the existence of a "system" even in the absence of formal coordination. Certainly in 1946, as today, there existed a network of informal professional relationships among physicians which led many of them to refer patients through the establishment. Though money is far from the motivating force, communities, through the allocation of resources, have determined the extent of the facilities and manpower available to them. Most patients do not choose physicians and hospitals at random, but rather seek out those with the "best reputations" from whom they expect to receive the level of care they want.

At the time these studies were issued, medical centers and specialty clinics such as the Mayo and Cleveland Clinics, Henry Ford Hospital, the University of Chicago, and others whose major source of admissions was referrals were flourishing despite the fact that no formal relationships with "outlying facilities" existed. The States of Indiana, Michigan, and Wisconsin, among others, had established teaching hospitals to handle referrals from private physicians in the state.

These, and other, examples, give indication that, although a system in the sense that the Commission on Hospital Care used the word perhaps did not exist, the health services establishment did not therefore consist of atomistic units which had no contact with one another. Some relationships existed, some *de facto* coordination took place, some patients were referred through the establishment. The recommendations of these studies, and the thrust of the survey re-

quirements of the Hill-Burton Act, discussed in the next section, were concerned with encouraging, extending, improving, strengthening, and formalizing relationships which in the best judgment of the leaders in the field were desirable. What is sometimes overlooked is that the components of the system were already related to one another as the result of custom, reputation, etc. and only by recognizing existing relationships and either altering or building on them could any superordinate agency hope to accomplish its aims.

B. 1946-1958: THE HILL-BURTON ACT AND ITS AFTERMATH

By 1946 a general shortage of hospitals, their less than perfect geographic distribution and the lack of coordination among them were well recognized by both the public and the policy makers. During the depression of the 1930's few new hospitals had been constructed. This was followed by further restrictions imposed by World War II. Many existing facilities were obsolete and the problem was exacerbated by a rapid population growth, migration from rural to urban areas, and rapidly rising construction costs. These factors operated to create crowded conditions and to reduce the amount and quality of care available to those admitted.

Rural areas faced an even more serious problem. They invariably revealed a lower bed-population ratio, a lower utilization rate and a relatively high concentration of unacceptable beds than did urban areas. More than 1/3 of the counties in the nation had no hospital beds at all.

Concomitantly, there was a shortage of medical personnel in rural areas as compared to urban. Because of improvements in medical services and the increasing complexity and specialization of these services, medical care tended to be centered more and more in hospitals, accompanied by a concentration of medical personnel in the areas of existing hospital facilities.

As a direct result of these situations, a number of proposals were made that called for government action in the hospital field. It was argued that (1) the nation had the obligation of striving toward a healthier population, (2) more and better medical services and facilities must be made available to the population, (3) the hospital was the central instrument in the provision of such services, and (4) far too many hospitals in the United States were inadequate for the provision of needed care. A Federal assistance program seemed to many to offer the necessary solution [47].

As early as 1940, a "National Hospital Act" providing for the appropriation of several million dollars for hospital construction in rural areas had foundered in congressional hearings. The primary reasons for the demise of this act were lack of support by the Roosevelt Administration, which at the time was preoccupied with foreign affairs, and fierce attacks from the medical profession. In addition, the bill was criticized by the American, Protestant, and Catholic Hospital Associations on the grounds that it ignored the financial plight of voluntary hospitals. Even its defenders, including organized labor, farm groups and the small, but influential, Committee of Physicians for the Improvement of Medical Care, had criticisms to offer.

By 1945, however, not only were resources more available, having been freed from wartime use, but the need itself was more apparent with hundreds of thousands of men returning to civilian life and millions of dollars available for spending on the part of potential consumers of health care. In that year, the Hospital Construction Act, designed to alleviate the problem, was introduced in the Senate by Lister Hill and Harold Burton. The purpose of the Hill-Burton Act, as it came to be called, is stated in Part A, Section 601 of the Act as finally published as follows:

> The purpose of this title is to assist the several states—
>
> (a) to inventory their existing hospitals, to survey the need for construction of hospitals, and to develop programs for construction of such public and other non-profit hospitals as will, in conjunction with existing facilities, afford the necessary physical facilities for furnishing adequate hospitals, clinics, and similar services to all people; and
>
> (b) to construct public and other non-profit hospitals in accordance with such programs.

Thus emphasis is placed on a two-phase process. The first phase calls for the survey of existing facilities and the development of a comprehensive plan setting forth the states' most pressing needs. In the second phase, Federal assistance was to be provided for the con-

struction of hospitals, public health centers, and related facilities.

This emphasis on surveying existing facilities and developing a plan had not been present in the law from the beginning. In fact, during the Senate hearings in 1945, there was very little said about the "survey" aspects of the bill. Donald C. Smelzer, President of the American Hospital Association, made only one passing reference to it in his testimony in 1945 before the Senate Committee [56:11]. He was much more interested in state financial participation and in the role of the Federal Hospital Council. In a question and answer document read into the Congressional Record, only two of the thirty questions dealt even peripherally with the survey aspect of the bill—and these dealt mainly with eligibility of the states to receive funds as related to the existence of a plan.

Rev. Alfonzo M. Schwitalla, of the Catholic Hospital Association, thought it necessary to make explicit in the record that the "survey" part of the bill was, in fact, a survey of facilities and not of financial need [56:36]. Even the Surgeon General, Thomas Parran, who subsequently developed a highly detailed plan for regional coordination, mentioned only that community plans will be integrated into state plans which, in turn, will be submitted to the Federal government for approval [56:54].

The only evidence in the 1945 hearings of a strong bias toward planning and/or the "survey" section of the Act came in the testimony of Mr. D. K. Este Fisher, Jr., of the American Institute of Architects:

> The members of the A.I.A. who are experienced in hospital and public health center design are convinced (along with physicians, hospital consultants and managers, state and county health officials, and other expert members of the A.H.A. and A.P.H.A.) that the entire hospital and public health facility picture in this country should be reviewed and analyzed as an over-all regional picture, with a view to laying plans . . . for the proper distribution of the greater and more completely adequate facilities which unquestionably should be provided in the years following the war [56:268].

The changes which were made in the bill between the original hearings in 1945 and those held in 1946 primarily involved the insertion of specific provision for developing state plans, making allocation of funds to the state dependent upon the existence of such a plan. In addition, the role of the Federal Hospital Council as set forth in the Act was strengthened, presumably to obtain more support from those groups concerned with increasing Federal intervention.

In the 1946 hearings before the House of Representatives Subcommittee, the testimony of Donald Smeltzer of A.H.A. differs substantially from his remarks a year earlier. He stresses the need for state plans and mentions the Bachmeyer Commission (The Commission on Hospital Care) and the role of the American Hospital Association in forming the commission [49:45]. In Dr. Smeltzer's testimony appears the first reference to the Hospital *Survey* and Construction Act. Up until this point, and in fact up until the time the Act was actually passed and published, its title was simply Hospital Construction Act, and the word Survey did not appear.

In the 1946 hearing, Dr. Thomas Parran presented the idea of a "regional plan" which had first appeared a few months earlier in a USPHS publication [36]. It was ultimately to become quite popular. He suggested that the Hill-Burton Act concern itself with four types of "hospital" facilities: medical centers, district hospitals, rural hospitals, and health centers [49:16 *et seq.*]. Also, in his testimony appears the first mention of a geographic consideration of the distribution of specialists and general practitioners (49:21).

As finally passed, the Act authorized the appropriation of $3,000,000, to be alloted among the states according to population, except that no state would receive less than $10,000. The states were to draw upon these allotments to meet one-third of the expenses necessary for carrying out the survey and making the plan. To qualify for funds, the states had to meet several requirements [41:3]:

> 1) The state must designate a single state agency to conduct the survey, to supervise the planning, and to make all necessary reports.
> 2) The state must provide for a State Advisory Council composed of the representatives of the consumers of hospital service and of government and non-governmental groups concerned with the operation, construction, and utilization of hospitals.
> 3) The state must establish a plan for conducting a survey of its existing hospital and related facilities with a view to developing a program of needed construction.

The states were instructed to establish one or more regions within their boundaries. Each region was comprised of a group of two or more general hospital areas having hospitals which could be closely

related to provide better hospital care through cooperative effort. Each area was to contain one or more hospitals; the boundaries of the area were drawn to include the population which tended in the main to seek service from the hospital located in the area.

According to the regulations which accompanied the Act, there were to be three types of areas: (1) basic areas containing a medical school or a hospital of more than 200 beds, (2) intermediate areas in which there were more than 25,000 people and at least one hospital with more than 100 beds, and (3) rural areas which constituted all those not covered in the above specifications.

By December 31, 1948, all of the states except Nevada had developed plans and had received approval for them from the Federal government. A total of $1,117,716 had been paid out to the states for this purpose. Arizona, Florida, Indiana, Louisiana, Mississippi, North Dakota, South Carolina, Washington, West Virginia, Alaska, and Hawaii had utilized in full their available allotments as of that date. Forty-four of the 53 states and territories had designated the State Department of Health to run the survey and construction program. In the other nine states, a different agency was appointed.

The state plan of Illinois, started in April, 1945 (before the passage of the Hill-Burton Act), provides a reasonably typical example of the plans developed by the states. It required: (1) that service (in general hospitals) should be complete, (2) that the size of a hospital should be determined on the basis of need (although there was quite a lot of hedging concerning minimum size), (3) in general it preferred larger to smaller hospitals, (4) it established a maximum distance from any person's home to the hospital (25 miles) [30:2–9].

Little mention was made of the requirements for professional personnel to staff these facilities, although the following quote represents a recognition of the problem:

> . . . (this report) might lead to the conclusion that each type of facility and kind of service is separate, distinct, and easily circumscribed. . . . (But) the end in view is not only to provide beds and other patient facilities, but to recognize a pattern of distribution which will permit coordination of all health services between the various types of hospitals and local health units and which will encourage expansion and development of clinical teaching and research.
>
> It is believed that liaison relationship between small and incomplete hospitals, specialized institutions, and large medical centers, and between all types of hospitals and health agencies can, with reciprocal advantage, be developed on a voluntary basis.
>
> There has been no significant experience in Illinois with methods for establishing and maintaining the flow of those professional services and patients between institutions of one type and another in order to use and integrate all levels of service efficiently. The fears that autonomy of individual institutions might be lost and that patients might become agents of individual hospitals to be shuttled back and forth in an impersonal manner have impeded development of practicable aspects of this idea [30:15].

This is followed by a statement which represents a good deal of hope on the part of the writers of the document:

> There is, however, substantial agreement that the small community hospital should be affiliated with larger hospitals in the region [30:15-16].

This was to be accomplished by means of two techniques: (1) regional hospital councils comprised of representatives of various institutions should be created to facilitate joint discussion (i.e., districting of the state association); (2) the professional personnel in the medical center facility and its tributary area might conduct continuation courses and studies in analyses of vital statistics and clinical experience on a regional basis rather than by county, society, or individual hospital.

The emphasis on the survey and planning aspects of the bill and the agreement as to their efficacy were not so evident at the national policy-making level, however. In the transactions of the American Hospital Association at their annual meeting in 1946 immediately following passage of the Hill-Burton Act, President Peter D. Ward, M.D. did not mention this aspect of the bill:

> Two of (its) outstanding features are the sharing of authority on the Federal level with the Federal hospital council and the substantial grants of authority to states for the administration of their own program.
>
> We hope that public works programs will not be necessary to bolster the economy of this country. Yet there is every indication that government spending will be practiced from time to time during depressions. If such times come, we shall see hospitals occupying an important place in the most needed public works project. This legislation establishes for the first time in a regular peace-time program, the public nature of the voluntary hospital [1:1946].

In an article entitled, "The Physician's Point of View on Regional Organization of Hospitals," Dr. J. W. Cline of California took a stand against regionalization [16]:

The matter has not been widely discussed in the state associations nor in the American Medical Association. My opinion, therefore, must be based on a wide acquaintanceship (with physicians) in all parts of the country and a knowledge of their reactions.

The medical profession recognizes the need for reasonable regulations, licensure, and inspection of hospitals, but it would resist perversion of this function of government to bring about an integrated plan of regional organization of hospitals . . . and selected use of tax funds.

He specifically objected to the "military hierarchy" aspects of referral under certain systems and the potential selective use of government funds to encourage or discourage particular programs and developments.

It is important to note, in light of this comment, that nowhere in the original act or the subsequent amendments is there any reference to the encouragement of cooperation or regional coordination among health facilities. The only reference is to regional distribution of hospital beds. Section 622(a) of the Act required the Surgeon General to issue general regulations prescribing "the number of general hospital beds required to provide adequate hospital services to the people residing in a state, and the general method or methods by which such beds shall be distributed among base areas, intermediate areas, and rural areas." Thus, the Act does not require that relationships among hospitals or health agencies be established, but only that there be a rational geographic distribution of beds.

Today, when the term *comprehensive health planning* is used, what is generally meant is an activity designed to promote high quality medical services, improve utilization of existing facilities, encourage proper geographic distribution of services, eliminate unnecessary duplication, and, in general, to integrate the various components into a closely organized system. This is the definition implied in Surgeon General Burney's keynote speech to the regional conference in Chicago in 1958 [8:3–12] and made explicit two years later by the Joint American Hospital Association–U.S. Public Health Service Committee. In the Hill-Burton Act, the associated regulations, and in the literature which appeared in the late 1940's and early 1950's [for example, 41], however, the concept had a more limited meaning. Planning for hospitals meant promoting an adequate geographical distribution with respect to population, and

comprehensive planning meant promoting an adequate distribution of other types of health facilities as well.

The change in this concept from the earlier, more limited, meaning to its present broad connotation was gradual; it is difficult to pinpoint the steps in its evolution. It is likely that the leadership in the health field and the Public Health Service became aware of the inadequacies of facility planning alone as a method for moving toward an "optimal" system and began to redefine "comprehensive planning" to encompass more and more. In Public Law 89-749, passed in 1966 and discussed later, the meaning of the term comprehensive planning was again broadened to include environmental and manpower factors as well as physical and organizational ones.

Between 1946 and 1961, the idea of regional coordination grew in popularity. Articles appeared in journals reproducing Surgeon General Parran's regional hospital systems diagrams. Designers, architects, hospital administrators and representatives of the Federal government indicated that areawide planning might provide a solution to many of the ills in the health field.

An interesting pattern can be discerned by looking at the number of articles dealing with the general subject of planning (other than architectural) appearing in the various health field journals in different years. Table I displays this data.

TABLE I

NUMBER OF JOURNAL ARTICLES ON HEALTH FACILITY PLANNING 1946–1965 (4-year intervals)

Years	Total No. of Articles
1946–49	40
1950–53	20
1954–57	11
1958–61	103
1962–65	188

Source: American Hospital Association, Cumulative Index of Hospital Literature (1945–49, 1950–54, 1955–59, 1960, 1961, 1962, 1963, 1964, 1965). Prior to 1960, when the Cumulative Index adopted a separate classification for such articles, the criteria for inclusion in the table was judgmental and based on titles.

Interest, at least insofar as the publication of articles is concerned, grew steadily during the latter part of the 1940's, immediate-

ly following the passage of the Hill-Burton Act. In the early part of the 50's it declined until, by 1954, very little was being written concerning it. Following the four regional conferences held around the country in 1958 and sponsored jointly by the American Hospital Association and the U.S. Public Health Service, interest again grew and the number of articles published increased sharply. Following the publication of the report of the Joint Committee of the American Hospital Association and Public Health Service, interest, at least as measured by the number of articles published, remained high.

What had the framers of the Hill-Burton Act expected it to accomplish, and what has it accomplished? There were two basic purposes stated:

1) to assist the states in inventorying existing health facilities and developing programs for construction.
2) to construct public and other non-profit health facilities in accordance with such programs.

That these two explicit purposes had been fulfilled is obvious. Each of the 53 states and possessions had developed plans and had had priorities assigned to the various projects. Between 1946 and 1961, according to the annual *Hill-Burton Program Progress Reports*, $1.55 billion of Federal money and $3.38 billion of State and local funds had been expended in the construction of facilities housing 238,946 beds, 79 per cent of them in general hospitals. One-third of all the beds added in this period were in communities with from 10,000 to 50,000 residents. In addition, the standards established by the regulations had resulted in improved design and construction of physical facilities.

In *The Nation's Health Facilities* [53:17–18], the authors list three additional "unexpected gains" which had resulted from the operation of the Hill-Burton Program:

1) it provided a working example of cooperation between levels of government which resulted in a program which was reasonably flexible and closely oriented to local needs without losing the state-wide perspective.
2) the requirement that states adopt regulations for the maintenance and operation of the new facilities encouraged them to adopt new and better licensure laws.
3) the financing of projects involving Federal, State, and local funds generated a "sense of community responsibility for health facilities" in place of a former primary reliance on philanthropy as a source of funds.

The program was accomplishing what it was designed to do under the letter of the law. It had not, however, resulted in the development of a tightly coordinated health services system beyond that degree of coordination which existed anyway as the result of economic forces and the interrelationships developed in the framework of the private practice of medicine as mentioned above. In a publication issued by the American Medical Association in 1959, using a question and answer format to discuss the Hill-Burton Act, the following exchange is presented:

Question: Has a coordinated hospital system developed?
Answer: At the time of the adoption of the original Hill-Burton Act, some of the people testifying on its behalf stated that its purpose should include development of a coordinated hospital system in each state. Such a system, it was stated, would involve a flow of patients between base, intermediate, and rural hospitals.
The state plans required by the Federal administrative agency have outlined such systems. In the 14 states visited (by the writers of the study), however, the "coordinated hospital system" was described as existing only on paper.
There was apparently no demand, nor desire, for such a system. The one exception was noted as Puerto Rico, where proposals had been made for regulation of hospital services according to such a plan [22:20–1].

Further evidence that formal integration and/or coordination had not taken place was provided in a study done by the Pennsylvania Economy League for the Associated Hospital Services of Pittsburgh in 1959 [39]. The writers of this document state:

When asked the question, "to what extent does your present planning take into account what other hospitals in the area are planning to do?" eleven hospital administrators answered little or none, twenty gave no answer, and one mentioned that he discussed his plans with the hospital council.

The conclusion reached by the League, based on this, was:

An analysis of the . . . data indicates that although individual hospitals are continuously planning ways to meet better the needs of the patients whom they serve, there is an absence of coordination of planning among the hospitals [39:13].

C. 1958-1961: REVITALIZATION OF THE CONCEPT: REPORT OF THE JOINT COMMITTEE

In 1958, twelve years after the passage of the Hill-Burton Act, plans were made for four regional conferences to be called for the purpose of developing "principles for planning the future hospital system." The meetings were to be conducted in Chicago, New Orleans, Salt Lake City, and Washington, D.C. The American Hospital Association and the Public Health Service served as co-sponsors for these regional conferences and had as their goal the development of guidelines to "plan tomorrow's hospital as the focal point for community health services in a coordinated system developed by an areawide planning group."

As noted at the end of the last section, it had, by this time, become obvious to leaders in the field that simply providing for intelligent placement of hospitals with respect to one another was not sufficient to develop interrelationships and coordination among them. Local variations in the nature of medical practice, customs and associations which had developed over time and were firmly entrenched, even, on occasion, provincialism and petty jealousies, conspired to make a firm system of formal relationships difficult, if not impossible, to establish on a regional basis.

The American Medical Association, in the document quoted earlier, noted:

> . . . there is evidence that the construction of rural, intermediate, and base general hospitals has made facilities of each type available to almost all of the people. As long as the individual patient, physician, and hospital retain their independence, the use of facilities on the three levels will depend on local customs of medical practice and interrelationships, largely personal in nature [22:21].

Any direct program at either the Federal or State level to do any more than encourage and facilitate coordination might well be viewed as an infringement on the independence of the individual patient, physician, and/or hospital. Thus, those interested in developing such coordination turned to the field itself. Though, as noted later, the regional planning agencies which were in operation in 1959 were not having unmitigated success, the hope for the successful establishment of a coordinated hospital *system* seemed to lie

in the establishment of voluntary agencies on a local scale whose object would be to develop new salutory arrangements among elements of the health field and to alter or eliminate those which seemed deleterious. This was the message communicated at the regional conferences.

As noted in the keynote address delivered by Surgeon General LeRoy E. Burney at the Chicago Meeting, "The importance of these conferences is the opportunity they provide various groups to see through basic issues, mark out major problem areas—and hopefully develop some principles for broad-scale planning." [8:iv]

That no easy solutions existed was obvious. George Bugbee, speaking at one of these conferences, made the following statement:

> Much of the Federal money for construction has gone to areas with so great a deficit in beds that planning could be totally elementary and still not result in the construction of unnecessary hospitals. However, now that much of the need for general hospitals in outlying areas has been met, we are confronted with far more difficult planning problems.

Ray Brown expressed frustration concerning the possibility of the planning movement solving these problems when he said:

> It all adds up to the public demanding convenient use, rather than efficient use, of their hospitals. . . . The public faces a dilemma insofar as its hospitals are concerned. It insists in one breath that it have every new medical advance in every one of its hospitals; that it have a hospital located conveniently to every member of the public, even though this means fragmentizing its hospital system into uneconomic sized units and upon utilizing its hospitals at its convenience, rather than in the most efficient manner. In the same breath, it expresses growing concern and anxiety over the rapidly increasing costs of hospital care; it points its finger at its hospitals over the increasing utilization that it, itself, is making of its hospitals; and it contests the attempts of its prepayment plans to charge the necessary rates with which to pay for the hospital service it is demanding and getting. . . . Only the public can control the public. The trouble with the public is that it is made up of many individuals, and groups of individuals, who quite naturally act as individuals, rather than as the public-at-large [8:27–30].

He went on to advocate a scheme for franchising hospitals as a way to meet this dilemma. The need for force or sanctions to make planning "work" was echoed by John H. Zenger, speaking for the American Hospital Association Council on Planning, Financing and Prepayment:

> Probably there never will be the amount of planning which might be

desirable to provide a fully integrated hospital system, with its major or base institutions in the large metropolitan centers, and the intermediate hospitals and health centers in the small communities [57:41].

He mentions that areawide planning had available to it no sanctions which could be imposed upon non-cooperating agencies in the interest of creating a "fully integrated hospital system." He continues:

To achieve such an integrated system would probably require a totalitarian government, which fortunately we are not likely to have. Certainly the medical profession has a part in shaping the general plan for construction in rural areas, and their attitudes are based on personal experiences, rather than over-all values [57:41].

Though this is probably an overstatement, it bears closer examination. Is an integrated system, in the sense meant here, possible in the absence of force (of law?) to bring it into being and preserve it? Are "attitudes based on personal experiences, rather than over-all values" sufficiently powerful to prevent effective coordination? Or can voluntary agencies, working at the local level and capitalizing on the fact that private interest and public interest are not necessarily diametrically opposed, shape a coordinated, integrated system? These questions remain unanswered today.

Since 1959, many planning agencies have developed effective techniques—including the creation of working relationships with state Hill-Burton Agencies and Blue Cross plans—which make it possible for them to erect financial barriers in the way of those proposals which are judged to be ill-advised as well as to encourage those which they support. Such techniques perhaps make recourse to legal procedures unnecessary. It is important, however, to note the negative connotation of the foregoing. It has as yet not been demonstrated that the use of persuasion and reason alone will result in the tightly coordinated, "fully integrated" system which was being sought in 1959.

Little was decided at these regional conferences, but they did serve to publicize the idea of voluntary areawide planning, and generally to revive interest in the activity itself and in its potential. This interest crystallized two years later in the publication of the report of the Joint Committee of the American Hospital Association

and the United States Public Health Service titled *Areawide Planning for Hospitals and Related Health Facilities.*

In 1959, when the Pennsylvania Economy League surveyed the state of the art of areawide planning in New York, Chicago, Philadelphia, Detroit, Cleveland, Kansas City and Columbus, they found three major types of structure for planning and/or fund raising [39:7]:

1. A hospital (coordinating) council—a traditional membership organization supported by dues from hospitals.
2. A hospital planning association—a community-centered problem-oriented organization, representation by communities as well as hospital personnel.
3. The integrated coordinating and planning council—coordinating functions and programs carried out by professional representatives; long range capital planning by a citizens' committee; membership on board typically heavy weighted with lay representatives.

The staff report of the Joint American Hospital Association–U.S. Public Health Service Committee notes these three general types of organizations and then goes on to say [21:21]:

Few of the planning councils are generally representative of the community in the broadest terms. Only twelve or thirteen groups are engaged in long-range planning, among the 26 staffed local organizations. There are approximately 80 metropolitan areas in which the state Hill-Burton agencies program more than 1,000 beds which have no staffed organization whatsoever, although an undetermined number of these areas have some form of voluntary council, usually a conference of administrators.

No existing council staff numbers more than ten professional members. Control and executive direction of the organization varies according to type and membership, the coordinating councils being controlled largely by trustees and administrators. Financing is varied, with hospital membership dues financing from ten to seventy-five per cent of the cost of coordinating councils, and supplemental funds coming from Blue Cross, foundations, and United Funds or Community Chests, and fees for special services. Voluntary planning associations are financed by contributions from industry and member organizations.

The hospital councils, as envisioned by the Pennsylvania Economy League and the Joint Committee, have three functions:

1. To engage in cooperative activities in direct patient care.
2. To engage in cooperative activities in solution of common problems.
3. To engage in cooperative activities in capital planning and fund raising.

With respect to direct patient care, the agency in Rochester had been making attempts since 1945 to offer cooperative services to hospitals, the agency in Columbus had made some starts in the area, and the Bingham Associates Plan in Maine also had made some efforts along this line. However, the Joint Committee felt the following statement was appropriate:

> Although the regionalization process in direct patient care may be gaining momentum, it is still a long way from the full bloom envisoned at the beginning of the Hill-Burton program, (12 years earlier) [21:8].

With respect to the second of the functions—cooperative effort at the solution of administrative problems—quite a lot of progress had apparently been made by 1961. The Joint Committee mentions such things as wage studies, research and statistical services, including information on hospital charges, financial and operating statistics, state and local legislative services, public relations services, development of uniform accounting, and Blue Cross and medical staff relations. This is apparently an area where developments are tangible and their usefulness is obvious to all concerned. In addition, it is an area where most administrators could agree that they would be better off as a result of the services, and, in fact, do not sacrifice any of their own interests in obtaining them. This is not true of either the first area—coordination of direct patient care services—or the third—capital planning.

With respect to capital planning, the Joint Committee found that it was not ordinarily carried out by the council involved in planning for the area. (They note that this is not the same thing as fund raising.) It is quite clear why capital planning is not the kind of activity that is likely to be acceptable to all hospital boards, physicians, and administrators in an area, since it involves the allocation of scarce resources to particular uses, and the source of the resources and their application may or may not be in the same institution.

As part of a general conclusion regarding the function and the success of hospital councils in planning, the Joint Committee made the following statement:

> A meaningful approach to an understanding of local organizational activity is to understand first that a wide range of goals and ends has prompted organized activity; and second, that organization has been on a piecemeal basis resulting in some communities in the existence of several groups (for example, three in New York City), each performing a different set of functions [21:11].

Following the deliberations of the Joint AHA-USPHS Committee, a report of the Committee was issued in July of 1961. As evidence of their belief in the efficacy of planning, the Committee states:

> Sound planning on an areawide basis can help to stem the rapid rise in costs of both capital construction and subsequent operation of our facilities. Moreover, it can help in the development of a system of facilities and services to provide efficient and high quality care. [32:1]

The Committee report then goes on to provide a list of activities, data and suggestions for planning agencies. It indicates that areawide planning is both desirable and possible, that it should be a continuing process and that, if properly executed, it will help to assure that future expenditures for construction, expansion, renovation and replacement of hospitals and related facilities will be made in response to established need. The Committee summarized its conclusions by noting that areawide planning will aid communities in:

> Maintaining and improving quality of care as economically as possible;
> Correcting deficiencies in existing facilities and services;
> Stimulating the construction of needed facilities, including those for education and training;
> Discouraging construction not conforming to community needs;
> Assuring more effective use of community funds by avoiding unnecessary duplication of highly specialized, infrequently used, expensive facilities;
> Improving patient care by developing more effective interrelationships among facilities;
> Developing an orderly distribution of all facilities in keeping with the projected population characteristics and over all community development;
> Encouraging individual facilities to define and carry out their objectives and projected roles in relation to other facilities, services and community needs;
> Stimulating facilities to recognize opportunities for better coordination of services;
> Demonstrating the need for philanthropic and public funds through a well-developed information program.

Thus the report of the Joint Committee of the American Hospital Association and the United States Public Health Service provided an incentive and a justification for the expansion of formal voluntary areawide planning activities as well as a set of guidelines under which such activity should be undertaken.

An interesting attribute of the Committee's report is that it nowhere suggests an evaluation of the function or efficacy of planning, despite the staff findings mentioned above. Instead, it gives an unqualified endorsement to the concept when it says:

> During the past fifteen years, the Hill-Burton program has given great impetus to hospital and related health facility planning on the Federal and state levels. Efforts at metropolitan area planning developed in a few cities in the 30's, but the past decade has seen extension into more than a dozen large communities. These local planning groups are demonstrating the effectiveness of community-based effort in meeting the special problems of urban areas and in supplementing statewide planning. The Committee therefore strongly urges that this technique be extended by organizing broadly based areawide planning agencies in all communities. [32:1]

D. 1961-1967: GROWTH AND CONSOLIDATION OF THE MOVEMENT

THE REPORT OF THE Joint Committee was accepted by the field as a basic document concerning planning, and the guidelines it set forth were used generally to organize and operate planning agencies during the subsequent years. The Federal government, in addition to supporting this committee and publishing its report, also began to provide large amounts of money in the form of seed grants and operating funds for areawide planning agencies throughout the country. The number of such agencies increased from fourteen in 1961, when the report was issued, to twenty-five in 1962, forty-two in 1963, fifty-seven in 1964, sixty-eight in 1965, and eighty in 1966. The Public Health Service has, since 1963, sponsored annual institutes for the staffs of areawide health facility planning agencies, and attendance at these institutes has doubled in the years since they began.

The first grant made under the Community Health Services and Facilities Act of 1961, the source of the federal funds available to planning agencies, was in June of 1961. By 1967, more than half of the agencies in existence were recipients of such grants, and the total amount distributed under the program had reached thirteen million dollars. In 1964, the Hill-Harris amendments to the Hill-Burton Act provided additional funds for planning and, in addition, made it possible to provide matching funds for the purpose of establishing planning agencies in areas where there had been none before.

In September of 1963, the U.S. Public Health Service issued a manual, *Procedures for Areawide Health Facility Planning* [55], which was designed to amplify and detail the recommendations made in the Report of the Joint Committee. When the staffs of areawide health facility planning agencies met at their first Institute, their purpose was to discuss and evaluate this manual. From this discussion, a general consensus was developed concerning the purposes and goals which planning agencies should set for themselves [14:5]. The list is lengthy, but illuminating:

1. Maintain and improve quality of care as economically as possible.
2. Correct deficiencies in existing facilities and services.
3. Stimulate construction of needed facilities including those for educational purposes.
4. Discourage construction not conforming to community needs.
5. Assure more effective use of community funds by avoiding unnecessary duplication of highly specialized, infrequently used, expensive facilities.
6. Improve patient care by developing more effective interrelationship of facilities.
7. Develop an orderly distribution of all facilities in keeping with expected population characteristics and over-all community development.
8. Encourage individual facilities to define and carry out their objectives and projected roles in relation to other facilities, services, and community needs.
9. Stimulate facilities to recognize opportunities for better coordination of service.
10. Demonstrate the need for philanthropic and public funds through a well-developed information program.
11. Determine and project needs for services, facilities, and personnel.
12. Provide information and guidance for decision-makers.
13. Develop balance among the various categories of facilities within the area.
14. Maintain flexibility in planning.
15. Develop systematic procedures for evaluating projects.
16. Promote understanding of the planning process on the part of the public and appropriate groups.
17. Cooperate with appropriate governmental and private agencies.
18. Coordinate activities with other community planning agencies.

19. Identify the value judgments involved in the provision of adequate facilities and services and involve the community in decision-making.
20. Maintain a central storehouse for a body of knowledge and specialists which other local organizations are unable to maintain.
21. Develop broad participation in the decision-making process.
22. Analyze new trends in the organization of medical care and apprize the public and appropriate groups of their possible impact on the demand for services and facilities.

Aside from some duplication in the list, it represents what most could agree to as a comprehensive and well-stated collection of the goals of health facility planning agencies as well as some of the mechanisms useful in making planning work. What is interesting, and important, is that basically the same goals had been set and enunciated many times during the previous thirty years and yet little progress had been made toward their achievement. Nevertheless, consensus of the group attending the first institute was that they stood on the threshold of an era in which financing and professional and technical skills were for the first time available and in which great steps could be taken to accomplish the goals.

They seemed to have good reason to feel that way. Money was certainly available. The number of agencies was growing rapidly and, though some were virtually one-man operations, a number were well staffed with personnel possessing the necessary technical skills. Furthermore, planning agencies, particularly those in larger metropolitan areas which had been in existence for some time, had been visibly successful in discouraging construction of facilities which, in their opinions, were not needed.

Meanwhile, the horizons of interest were expanding. In addition to their longstanding concern with construction of facilities and their geographic distribution, planners began to be involved with modernization of existing facilities as well as the provision of facilities and programs designed for purposes other than hospitalization of acutely ill patients. Hospitals for the mentally ill and for long-term care, clinics for the mentally retarded, home care programs, and other "out-of-hospital" health services began to attract their attention. The involvement in the planning process of organized medicine, consumers of medical care, community leaders, and administrators of individual hospitals was undertaken. Amendments to

the Hill-Burton Act providing funds for modernization as well as for the construction of new types of facilities both engendered and reinforced this interest.

Since 1963, legislation, notably Titles XVIII and XIX of the Social Security Act ("Medicare" and "Medicaid"), P.L. 89-239 (Education, Research, Training, and Demonstrations in the Fields of Heart Disease, Cancer, Stroke, and Related Diseases), and P.L. 89-749 (Comprehensive Health Planning and Public Health Services Amendments of 1966) encouraged and, indeed, forced health facility planning agencies to grow in number and in maturity to meet the increasingly recognized need for new methods, techniques, and technologies in the provision of health care.

Staffs of planning agencies have been expanded to include economists, behavioral scientists, demographers, statisticians, etc. Data collection and interpretation activities have increased along with research and consulting programs. Interest in and visibility of the activities of the agencies have increased also.

With increases in the number of health programs and activities, in amounts of money available for their accomplishment, and in the number of both official and unofficial groups involved, it seemed desirable to public policy makers to attempt to integrate the endeavors of various activities. The result was Public Law 89-749, The Comprehensive Health Planning and Public Health Service Amendments of 1966, passed into law on November 3, 1966. This legislation is designed to [12]:

a) provide for comprehensive planning for health services, health manpower, and health facilities on the State and local level.

b) Strengthen and improve existing Public Health formula and project grant programs.

c) Provide for the interchange of Federal and State and local health workers.

d) Continue the existing program of formula grants for schools of public health.

e) Broaden and increase the flexibility to support for health services in the community.

To participate, each State must submit a "plan for comprehensive health planning" which designates a single State agency to adminster the planning process (and to approve Federal grants to

areawide health planning agencies), and establishes a State health planning council to advise the State planning agency. This council is to include representatives of State and local agencies, non-governmental organizations, and other groups concerned with health; but the majority of the membership is to consist of "representatives of consumers of health services" [37:2].

In the context of the Act, the word "comprehensive" looms important. With this action, Congress declared that:

> . . . fulfillment of our national purpose depends on promoting and assuring the highest level of health attainable for every person, in an environment which contributes positively to healthful individual and family living . . . [37:1].

This is truly a broad goal, enveloping not only providers of health care and the facilities involved, but also public health officials and others whose activities have in the past not often touched those of areawide planning agencies.

This idea was further solidified in the 1967 amendments proposed for this Act which, in addition to extending it through 1971 and making large additional amounts of money available, would add two pertinent provisions. First, the comprehensive state plan is required to provide for *direct* assistance to individual health care facilities in developing a capital program for replacement, modernization, and expansion as well as for a periodic review of such programs. Second, the 1967 amendments require that project grants to non-profit voluntary planning agencies are contingent upon "appropriate representation of the interests of local government."

Public Law 89-749, and the 1967 amendments, taken together represent a concerted effort on the part of government to consolidate a rather large number of parallel programs operating side-by-side at the state and local levels, thereby hopefully improving efficiency. But, they aso involve the creation of an institutionalized structure within which federal funds are available for health planning only after communications and relationships have been established among the various agencies concerned and between them and various levels of government in the interest of encouraging more broadly oriented and more "comprehensive" health planning.

It is, of course, too soon to tell what impact this legislation will have upon the growth and development of health care planning and

what concrete results can be expected as a result of it. Certainly it goes far in encouraging, indeed providing a mandate for, comprehensive health planning. It provides funds for the purpose and establishes a structure in which those concerned with questions of quality, availability, and costs of health care presumably coordinate their planning efforts most effectively. But it is important to note that the existence of a good planning *process* and the attainment of the desired results in the system itself may be only distantly related. Most of the stumbling blocks which have stood in the way of implementation of past planning decisions—unenlightened self-interest, parochialism, vaguely conceived objectives, etc.—remain untouched by this legislation.

A TIME FOR REAPPRAISAL?

THE SCIENCE AND the art as well as the scope of interest has changed greatly since 1920. Beginning with simple estimates of the number of beds needed which were based on crude expectations concerning morbidity, it progressed to the point where current studies recognize the mutual influences of thirty or more separate variables and sophisticated statistical techniques are used in obtaining the estimates. Beginning with an intuitive feeling that appropriate geographical distribution of facilities and programs would somehow insure a "tighter" system, it progressed to the point where demographers, location theorists, and economists can make estimates of the optimal number, type and location of facilities from the point of view of access and social cost.

The purpose of this monograph was to trace the development of the movement to the present time and to examine the current "state of the art." In light of this purpose, it is important to note that many of the accomplishments mentioned largely resulted from developments in the fields of statistics, applied mathematics, sociology, economics, etc. and not from developments in the field of planning *per se.*

The development of the movement has not been smooth. It has been marked by successive periods of vigorous activity and quiescence. Changes in public policy and in attitudes concerning the proper role of government and evolving exogenous forces, both economic and social, have influenced its course. In general, the responses to these changes have been pragmatic. In the mid-forties there was a serious shortage and mal-distribution of hospital beds—the Hill-Burton Act was passed to alleviate the condition. In the late fifties it became apparent that a Federal construction program alone would not provide the degree of coordination among facilities that seemed desirable—the establishment of voluntary planning agencies

was encouraged. In 1966, the proliferation of programs and agencies along with an official definition of the access to medical care as a right led to a recognition of the need for an overall program to promote and coordinate this activity—the Comprehensive Health Planning Act was passed.

No criticism of such pragmatic action is implied; it is practical, current, and frequently effective. From the point of view of an activity such as health planning, however, it has one serious fault—it leads to reaction rather than to action. Such an approach may result in action which prevents an existing situation from getting any worse rather than to programs which start with the situation as it is and improve upon it.

The central problem facing planners today, as in the past, is the development, sponsorship, and implementation of a cohesive *system* of health services. The potential value to society of planning activities lies squarely in this area. Unfortunately, we are not much closer to knowing how to accomplish this than we were thirty years ago.

In 1936, Arthur Bachmeyer, later the author of the report of the Committee on Hospital Care, made a speech to the Colorado Hospital Association on hospital planning [5]. Thirty-one years later, John W. Gardner, Secretary of Health, Education, and Welfare, reported to President Lyndon Johnson on Medical Care Prices [34]. A juxtaposition of selected quotations from these two sources makes this point:

Bachmeyer (1931): "Hospitals have usually been developed as independent entities without sufficient consideration of all existing conditions and circumstances. Not infrequently they have been located in close proximity to existing institutions without regard for community need, or for type, quantity, variety of extent of service which each institution offered."

Gardner (1967): "Most communities have no mechanism for health planning. There is nothing to prevent . . . the construction of a hospital or nursing home in an area already well served, or the perpetuation of several inefficient facilities where replacement with a modern health center would be preferable."

Bachmeyer (1931): "Planning should be done on a broad and comprehensive basis, duplication of special and unusual equipment and services should be eliminated. Careful study and coordination of effort . . . are necessary if a well-balanced program for service is to be obtained."

Gardner (1967): "(P.L. 89-749) is intended to coordinate existing and planned health services, to reduce overhead costs by increasing utilization rates, to prevent unnecessary expansion of hospital beds, and to encourage expansion of less costly services and facilities. It will also encourage the development of needed facilities which are not now available and improve the quality of medical care."

Apparently little progress toward the goal of an orderly, coordinated health services system had been made in the intervening years. This fact should be sufficient to lead us to pause and consider the fundamental premises and beliefs underlying the entire field of health planning and to thereby assess its future potential. Several rhetorical questions raised in the introductory section of this paper may now be examined in more detail.

First, *"Why should we plan?"* We have seen the answer to this question as we traced the development of the areawide health facility planning movement. We somehow feel that the system is not as "good" or as "neat" as it might be. Costs are "too high," quality is "too low," availability is too "restricted." Different groups of people have differential access to the system as a result of economic, ethnic, geographic, educational, or other factors, and we somehow feel that these differences should be reduced or eliminated. We have little evidence that the components of the system, acting alone, have the ability or the desire to completely solve these problems. Thus, a superordinate body of some sort is required to coordinate (and even direct) the action of the various disparate elements.

Two other reasons are sometimes given for the existence of areawide health facility planning agencies. (1) They serve as data banks for all health facilities in a given area and, since they have resources and time not available to individual hospitals, for example, they can collect and supply data to the hospitals as needed more efficiently than hospitals could do it for themselves. (2) Because a majority of hospitals and other health facilities are small, it is frequently true that they cannot afford to employ highly trained managers. As a result, the planning agency serves as a consultant to them and can, in fact, help them to manage their own institutions better.

Another of the questions raised originally, *"Is a planned system better than an unplanned one?"* is closely associated with the first. If by "better" we mean closer to what we think it ought to be in terms of quality, availability, costs, etc., and if we believe that economic forces play no role in this area, the answer is that a planned system will, at least, be no worse than an unplanned one. For a planned

system to be *better* than an unplanned one, however, it is necessary that the planned behavior and solution be demonstrably superior to those which would have existed without planning. Here a problem arises with respect to the words "better" and "superior."

We lack standards against which to judge it in a dynamic context. For example, suppose we were trying to describe an area's hospital service as a component of its health services system. Certainly we would be interested in the number, ownership, and type of service rendered by the hospitals and we would also be interested in their average sizes. Additionally, we could concern ourselves with size distribution, geographic distribution, scope of services offered, size and qualifications of the medical staff, etc. All of these factors can be measured rather easily. But what about those qualitative aspects of hospital operation which cannot be measured except by rather tenuous proxies: administrative efficiency, community orientation on the part of management, degree to which needs are actually being met, extent of coordination with other elements of the system and, finally, the quality of care being provided? Certainly it is important to know something about these in order to understand the current state of the system.

One could present similar lists of criteria—the data on some easily obtainable, on some totally unavailable—which would be relevant to an examination of medical practice, utilization patterns, prices and costs, extent of insurance, availability of other facilities and programs, public awareness of needs, etc. Each of these is certainly a part of the answer to the question, "What is the current state of the local health services system?" No one of them gives the whole answer; indeed, there is no guarantee that all of them together will give the whole answer. Furthermore, it is unlikely that we can determine all of the components of each.

But even if we did know what aspects should be measured, we would still face great difficulty in two areas. The first is implicit in the preceding discussion and deals with operationalization of the concepts to be used in the measurement. The second deals with the paucity and the poor quality of much of the data available. Both of these are mechanical questions and need not be dealt with in the current context, but anyone who has attempted to accumulate information in this area will recall numerous occasions when he came face to face with one or the other of these problems.

Even if we were able to accurately and completely describe the current state of the system and had perfect data available to us, we would still be faced with the greatest difficulty of all: *"How do we know whether a change or trend being observed is a desirable one?"* Are more hospital beds better or worse than fewer? Under what circumstances? Is an increase in the specialist/GP ratio better than a decrease? Does this answer hold regardless if the area is urban or rural? Are lower costs always to be preferred to higher costs? What about admission rates? Is a high rate to be preferred to a low one or vice versa? Depending upon this answer, how high is too high? How low is too low? Are small voluntary general hospitals likely to be better or worse in terms of quality than large proprietary hospitals? Better or worse in what respect? The questions could continue indefinitely.

No one can answer these questions, and that is precisely the problem which arises when one asks another of the original questions posed, *"What has planning accomplished and what can it accomplish?"* Again two conditions are necessary before an answer to this question can be attempted. First we must unambiguously know what is wanted in terms of accomplishment and second, we must have available measures of the degree of accomplishment. A tentative suggestion in this area is contained in the study reported in the appendix.

Finally, assume that the answers to all of the preceding questions are known with certainty. We would still have to answer *"What is the real cost of planning and is it worth it?"*

William H. Stewart, M.D., Surgeon General of the Public Health Service, in a speech to the National Health Forum of the National Health Council on March 21, 1967 gave an affirmative answer to this question when he said [45]:

> . . . our aspirations—for the individual and for society—have soared beyond our resources for fulfilling them. Whenever aspirations exceed resources at any point in time, choices must be made and priorities assigned. The planning process furnishes the basis for making choices among alternatives.

He then restated the declaration of purpose of P.L. 89-749, quoted earlier, and continued:

> These are inspiring words. They are overwhelming words to anyone who is comfortable only when health is narrowly defined. The Congress

is speaking not merely about the prolongation of lives and the reduction of disease but rather about the highest level of health attainable. It is speaking about an environment that is not merely free of specific hazard but one which contributes positively to individual and family living.

I want to make two points about that declaration. The first is that no lesser goal would be acceptable in today's America. No lesser goal would be consonant with the aspirations of the American people. The second is that health resources, as we have traditionally defined them—the private and public providers of services, the agencies with the word "health" or "medical" in the title—cannot possibly attain this goal if they work apart from each other or apart from other social forces.

Why should we plan? Surgeon General Stewart says we cannot attain the goals otherwise. Is planning worth the cost? The American public will settle for nothing less, we are told. If Dr. Bachmeyer said, "We shoud" and Secretary Gardner, "We will," Surgeon General Stewart is saying, "We must!" What has not yet been demonstrated is that we *can.*

Since 1930, planning for optimal health services has been viewed as desirable. First interest on the part of knowledgeable leaders in the health field, later large sums of money, and now a public mandate have been provided in support of the movement. Yet it remains in its adolescence. Whether it matures into a responsible, creative adult, or remains a groping unsure teenager, is a function not of the amount of money poured into it or the number of words poured out by the agencies and others involved, but rather of the wisdom and expertise brought to bear on the problem by the people involved and the intelligence and receptivity of people whom the planning process affects.

APPENDIX

AN ATTEMPT AT A METHOD OF EVALUATION

How ARE WE to measure the performance of an areawide health facility planning agency? We can look at quantitative measures of the "state of the system" as we do in this study; but we could argue that the true impact of such an agency is upon attitudes of people both within and without the system rather than upon "things", and cannot be observed (or, at least, measured) by counting hospitals, beds, etc. We could argue that activities are designed to fill gaps in the system rather than to change the system and that the effect is manifested in coordination and comprehensiveness rather than in numbers. In fact, unless we know why and under what circumstances agencies are organized, it is difficult to assess, or even to make intelligent statements about, their effectiveness.

In the present study, for example, we compare changes taking place in areas with planning agencies with similar changes in areas without them. Suppose that the amount or rate of change is related to what the area had to start with, and that an area that is already "well off" with respect to health services is less likely to change (other things being equal) than one that is not. Then, if planning agencies tend to be established by community leaders who are desperate about an existing (bad) situation in the community, rather than by people who know they already have a satisfactory situation with respect to health services, one would expect to see a "successful" agency bringing about large changes in the system. If the reverse is true, that is agencies tend to be established in communities which already have well-functioning health service systems as a result of the activities of a community leadership which sees planning as a positive force, one would expect to see little change occurring as a result of the establishment of a formal planning agency.

Unless and until we can be sure, or can obtain agreement upon, why planning agencies get started and what they explicitly set out to accomplish, measurement of their effectiveness will remain in the realm of the intelligent guess.

There are also problems associated with how to describe the existing system and how to evaluate in a qualitative way the direction and magnitude of changes observed. But the most serious problem involves the paucity and poor quality of the data available.

Additionally, the literature on the purposes of areawide planning agencies contains broad, non-specific and frequently ambiguous statements which make it difficult to ascertain in themselves. Included in their official statements of purpose are such items as [4]:

> To foster and promote the coordination of health facilities serving the area. (Alabama)
>
> To establish a means for coordinated community-wide approaches to meeting the health needs of the community in the field of hospital care. (Detroit)
>
> To improve hospital and health facilities and services, to grant financial aid to hospitals and health agencies, to promote cooperative action and coordination. (Rochester)

Even the Report of the Joint Committee of the American Hospital Association and the Public Health Service, *Areawide Planning for Hospitals and Related Health Facilities*, which probably represents the best and most careful thinking in the field, in discussing what the agency can accomplish, uses phrases such as [32:10], "needed facilities," "more effective use," "as economically as possible," and "unnecessary duplication" which do not lend themselves to quantitative measurement.

It seems apparent, under the circumstances, that an attempt to evaluate the areawide planning movement based on what the planners *state* as their goals will not bear fruit. How, then, are we to determine whether or not planning has been useful and effective?

No one has a ready solution to these problems, and that is precisely the difficulty faced by a person attempting to demonstrate *or* to disprove the effectiveness of areawide planning activities. Nevertheless, in order for rational decisions to be made concerning both development of public policy with respect to areawide health facility planning and the allocation of resources for this purpose, some notion about the relative values to society of alternative courses of action must be gained.

The present study represents an extremely crude and naïve attempt in this direction. Many assumptions are made (hopefully they are explicitly mentioned) and few conclusions are drawn.

The contribution which such an effort can make is limited to the suggestion that a critical approach to the problem of planning for the health services establishment is needed and, if the movement is to realize its full potential, such a critical approach is mandatory.

OBJECTIVE MEASURES OF EFFECTIVENESS*

There are some measures of effectiveness of medical services which, though crude, provide at least a point of departure for looking at the question in an objective fashion. Though the very word "effectiveness" is at least as ambiguous as some of the statements referred to above, it is felt that sufficient consensus exists as to the validity of certain broad criteria for measuring the adequacy of the health services in an area to make the present undertaking more than a semantic exercise.

Among such measures are:

1. number and type of hospitals
2. supply of beds
3. availability of services and programs
4. supply of physicians
5. utilization patterns
6. costs

Two things must be said concerning the measures listed. First, they are interrelated. A look at any one of them, without any attention to the others, will provide few useful answers. Second, each is subject, at least in theory, to influence on the part of the planning agency, either through its activities involving the allocation of funds and the approval of construction projects, or through its data dissemination and public education activities.

* "Effectiveness" as used throughout is defined to include both economy of operation and quality of care rendered.

The first point is obvious. For example, it has been said that the supply of beds determines their utilization [44], and it is "common knowledge" that patterns of utilization influence costs.

Quoting the Report of the Joint Committee, the AMA has said [2]:

> The fundamental determinant of short-term general hospital bed needs should be the current patterns of hospital usage in the region and an analysis of the factors which produce that pattern. These factors include (1) hospitalization practices of physicians serving the area, (2) financing as related to defined population groups within the population, (3) age and economic status of special groups within the region, and (4) the location of specialists and other physicians within the region and their ready access to highly skilled technical hospital personnel and complex equipment.

On the relationship of utilization patterns to costs, the AMA goes on to state (updating a statement by Ray Brown in *Principles for Planning the Future Hospital System,* U.S.P.H.S., p. 26):

> In 1962, the average daily census in nonfederal short-term general hospitals was 509,000 whereas their bed capacity was 677,000. In other words, one out of every four beds in these hospitals was empty 365 days of the year (on average), causing an idle investment of some $3.9 billion. Furthermore, if an empty bed is estimated as costing 50 per cent as much to maintain as an occupied bed, then 977 million dollars of the total operating cost of $6,841 million for all short-term general hospitals in 1962 went for maintaining unoccupied general hospital beds. [2:24]

Though one might question the economics and some of the assumptions involved, statements such as the last one do serve to support the point that the factors are interrelated.

Support for our second point, that planning agencies do, in fact, exert an influence on these factors, is, perforce, somewhat more tenuous. It is certainly true that the planning agencies *believe* that they can and are exerting an influence in these areas. The Hospital Planning Association of Allegheny County [28], the Columbus Hospital Federation [17], the Rochester Regional Hospital Council [42], the Hospital Planning Council for Metropolitan Chicago [29], the Hospital Planning Council for the Kansas City Metropolitan Area [4:37], and others have published statements from which supposition that they can or have affected one or more of these factors can be made.

Furthermore, organizations outside the planning field have indicated that they, too, think planning agencies are effective. In November, 1962, the AMA House of Delegates adopted a resolution concerning areawide planning which clearly indicated what they felt planning could accomplish [3:233].

> WHEREAS, Areawide hospital planning on a voluntary basis is recognized as an important method of providing hospital facilities; and
>
> WHEREAS, Adequate planning can decrease the total cost of medical care; and
>
> WHEREAS, Hospital planning can prevent expensive duplication of hospital and related health facilities; and
>
> WHEREAS, It is important for the medical profession to be a major force in working with influential and responsible citizens from all areas of the community; therefore be it
>
> RESOLVED, That the constituent medical associations and component medical societies and individual physicians be encouraged to demonstrate cooperation and exert leadership in the formulation and operation of these regional hospital planning bodies, and be alerted to fight enabling legislation which would convert this from a voluntary to a compulsory system.

Since planning agencies themselves believe that they can influence the levels of health care in an area as measured by the factors above, and since other interested groups seem to agree with them, it seems reasonable to assume that an attempt to evaluate their effectiveness through an examination of the relevant data for the appropriate planning area would be in order. The remainder of this appendix will be devoted to such an attempt. We will compare four standard metropolitan statistical areas in which planning agencies have been active for at least nine years with four other areas, similar in demography, where there has been no planning done on a formal basis, at least until recently. If the assumptions above are correct, we should find trends indicating greater effectiveness of health services in the planning areas than in those where there has been none.

DESIGN OF THE STUDY

The Standard Metropolitan Statistical Area (SMSA) was chosen as the area to be used in the study rather than the city itself or some other arbitrary aggregation of counties because in several Public Health Service publications recommendations such as the following are found:

> A major area for health planning is a natural economic or trade area of definable geographic and political subdivisions in which health resources

are appropriate and comprehensive enough to efficiently and economically provide health needs for its population. [32:2 and 18]

The first part of this recommendation is almost identical with the definition of SMSA given in the 1960 Census.

In no case does the SMSA coincide exactly with the area which the planning agency itself included within its jurisdiction, but in all cases it is included within the defined planning area and accounts for at least 70 per cent of the total population served by the agency.

Four SMSA's in which no formal planning agency exists have been selected as a "control group"* against which to compare developments in four similar areas with planning agencies. They have been paired with each other on a one-to-one basis.

Every attempt has been made to choose areas as similar as possible to one another. The members of the first three pairs are similar in most respects, including geography and (presumably) culture. The least confidence can be placed in Pair IV. Not only are the members of the pair geographically distinct, but their industrial and demographic patterns differ substantially. Table I compares the areas on the basis of a number of demographic factors, and shows the percentage differences between them. It is felt that the similarities are sufficiently great so that useful inferences can be drawn from the analysis. Taken together, the eight areas had a total population of 10,892,000 in 1950 and 12,135,000 in 1960, representing approximately 6 per cent of the population of the country in both years.

The study covers the period 1952–63 with respect to hospital and cost data, and 1958–65 with respect to the data on physicians. Population data were obtained from reports of the U.S. Bureau of the Census and the *Statistical Abstract of the United* for appropriate years. Hospital and cost data are from *Hospitals, JAHA-Guide Issue* for 1953 and 1964. Data on physicians are from *AMA Directory Report Service,* Vol. 16 and *Physician-Population Counts in the United States,* AMA, 1958.

Under the heading of the six factors discussed earlier, we will examine various measures of performance and change in the planned

* Although "control group" is a scientific term, there is no implication that this is a scientific study. The term seems to indicate more clearly than any other the purpose served by the pairing technique.

areas and compare them to what has taken place in those areas without planning. Because of the similarities between the members of each of the pairs, it is assumed that similar exogenous forces are acting upon them. (That is, for example, the extent of medical indigency, patterns of use, patterns of giving, etc. are similar.) Thus, we assume that in the absence of planning they would have developed, in aggregate, similar systems of health services. The fact that they are dissimilar with respect to use of health services at the beginning of the period in question does not fly in the face of this assumption. It may very well be that rate of change depends upon the magnitude of the factor in question—hence, rates of growth and status at any particular point in time may be quite different.

To overcome this potential criticism, we will look at changes over time (trends) rather than actual levels of any of the factors involved. One can probably safely assume that, if planning activities are effective, and if the planned area is "behind" at the beginning of the period with respect to the unplanned area, it will close the gap. If, on the other hand, the planned area is "ahead" at the start, it will probably increase its "lead." In either case, rate of change in the "proper" direction should be greater in the area with a planning agency than in the area without.

Before undertaking the analysis, it would seem a good idea to look at national trends in the health services during the period since these were taking place independently of planning activities and thus "would have occurred anyway."

Between 1953 and 1962 the number of voluntary general and special hospitals increased by 11 per cent and the number of beds by 28 per cent. Beds in proprietary hospitals increased by 3 per cent while the number of such hospitals declined by 23 per cent. Average size of all hospitals increased during the period. There was a decrease of 34 per cent in the number of hospitals with less than 25 beds and an increase in all other size categories, ranging up to 51 per cent in the 300–499 category. Total admissions increased by almost 1/3 during the ten years, with the largest single increase (46 per cent occurring in hospitals operated by state and local governments. Lengths of stay were shortened and admissions increased [51].

These changes, and others which will be mentioned from time to time, must be borne in mind as we look at the data to follow since

these fall under the heading of exogenous changes (occurring with or without planning activities), and changes in these directions might have occurred anyway in the areas with planning agencies.

ANALYSIS OF DATA

1. *Number and Type of Hospitals*

HOSPITALS CAN BE classified by ownership or by type of services rendered. Throughout this paper, consideration will be limited to non-federal, short-stay hospitals, both general and special.

As a gross measure of the effectiveness of planning agencies, one might use the relative proportions of voluntary and proprietary hospitals in a community. One of the most commonly held ideas in the health field is that of lower quality care offered by proprietary hospitals. Furthermore, executives of planning agencies have no more effective rallying cry than their success in discouraging the establishment of such hospitals. An underlying assumption appears to be that, without the inhibitory activities of planning agencies, proprietary hospitals would be more numerous. Thus, one would expect to observe a decrease in the number of such hospitals in areas where there are planning agencies.

Another, equally gross, measure is the relative proportion of general and specific hospitals. Hospitals which limit their care to certain types of patients are believed not to fit into the overall picture as well as do general hospitals, and are even thought in some circles to be anachronisms. The reasons given are primarily based on the problems of referral for patients with multiple diseases, problems of interruption in continuity of care, and lack of contact (and presumably, of professional growth) on the part of physicians.

Consensus on the undesirability of specialty hospitals is apparently strong. The workshop on Principles for Planning the Future Hospital System, held in Washington, D.C., made the following recommendation [8:140]:

> The hospital system of the future should not include hospitals limited to a particular type of acute care.

TABLE I

CHARACTERISTICS OF THE POPULATION: 8 SMSA's

	PAIR I			PAIR II			PAIR III			PAIR IV		
	Planned	Unplanned	Percent Diff.	Planned	Unplanned	Percent Diff.	Planned	Unplanned	Percent Diff.	Planned	Unplanned	Percent Diff.
1950 population (000)	503	519	3.1	487	407	19.9	815	904	11.0	3,017	3,671	21.7
1960 population (000)	683	695	1.7	586	525	11.6	1,039	1,072	3.1	3,762	4,342	15.4
Rate of Growth, 1950–60	35.7	33.9		20.3	28.9		27.6	18.5		24.7	18.3	
Median Years of School	11.9	11.4	4.3	11.2	11.5	2.7	11.9	10.3	15.5	10.8	10.5	2.9
Non-worker Ratio	1.48	1.53	3.4	1.42	1.30	9.2	1.43	1.56	9.1	1.60	1.45	10.3
Percent Unemployed	4.6	4.4	4.5	4.6	3.9	17.9	4.3	4.7	9.3	7.8	4.9	59.2
Percent Blue Collar Workers	26.2	37.8	44.3	42.8	34.5	24.0	24.6	33.0	34.1	40.7	35.8	13.7
Percent White Collar Workers	49.1	42.6	15.3	45.8	50.4	10.0	47.7	45.1	5.8	43.8	44.1	.7
Median Income (Family)	6,425	6,687	4.1	7,147	7,187	.6	6,317	6,318	.....	6,825	6,433	6.1
Percent Earning Less than $3,000	13.7	12.9	6.2	10.5	8.7	20.7	14.1	14.9	5.7	13.5	13.0	3.8
Percent Earning More than $10,000	18.5	19.3	4.3	23.3	23.5	.9	17.3	18.2	5.2	21.9	19.1	14.7
Percent Non-white	1.1	1.0	10.0	4.2	5.6	33.3	1.1	1.2	9.1	1.5	1.6	6.7
Number of Persons/House-hold	3.61	3.74	3.6	3.87	3.67	5.4	3.31	3.34	.9	3.78	3.56	6.2
DATA ON GENERAL HOSPITAL USE												
Admissions/1000—1952	133.4	98.8	35.0	133.1	185.3	39.2	127.4	101.5	25.5	89.4	100.6	12.5
Admissions/1000—1963	158.3	107.3	47.5	157.1	183.1	16.5	132.8	123.1	7.9	94.1	119.4	26.9
Percent Change	18.7	8.6		18.0	(1.2)		4.2	21.3		5.3	18.7	
Births/1000—1952	25.8	26.2	1.6	25.7	32.6	26.8	21.9	23.1	5.5	26.2	28.2	7.6
Births/1000—1963	25.2	18.7	34.8	27.1	30.8	13.4	18.9	22.0	16.4	24.3	25.1	3.3
Percent Change	(2.3)	(28.4)		5.4	(5.5)		(13.7)	(4.8)		(7.3)	(11.0)	

Source: See text.

A similar workshop group in Salt Lake City produced an equally strongly worded recommendation. Frank Sutton would not recommend specialty hospitals unless they were a part of a medical center. [46]

Equally strong agreement is not found with respect to other types of hospitals, nor with respect to the total number of hospitals. For example, the question, "Are more hospitals better than less?" does not have an easy answer. Another question which arose in the course of this study deals with whether or not the planning agencies concern themselves with beds in governmentally-operated hospitals. It would seem that they must be concerned with total number of hospitals and beds, but that their interest probably takes the form, "Given the number of governmental hospitals and beds, how many *others* are needed." Table II presents the findings with respect to number of hospitals and number of hospital beds classified by ownership and service offered.

Total number of hospitals remained unchanged in number in the areas with planning agencies, and decreased by 1.8 per cent in the unplanned, but the total number of beds increased by 23.8 per cent in the planned and decreased by 2.6 per cent in the unplanned. Since the unplanned areas began with significantly more beds, it is difficult to evaluate these figures.

With respect to proprietary hospitals, there was a decrease in number (68.8 per cent) and beds (54.0 per cent) in the planned areas, while in the unplanned areas the number of such hospitals decreased 42.9 per cent but the number of beds more than tripled. (If large proprietary hospitals are better than small ones, this situation may not be as bad as it would appear.)

Planned areas experienced a decrease in the number of specialty hospitals (28.5 per cent), but an increase in the number of such beds (37.5 per cent), and the unplanned areas had a similar decrease in number of specialty hospitals (29.4 per cent) coupled with a decrease of 0.8 per cent in the number of specialty hospital beds. Here, too, the relationship between size and quality would seem to be an important consideration.

Though much more could be said here concerning changes displayed in the table and the reasons for them, it would seem that

TABLE II
HOSPITALS AND BEDS:
8 SMSA's

	Planned Area			Unplanned Area		
	1952	1963	Percent Change	1952	1963	Percent Change
HOSPITALS:						
Total	113	113	.....	112	110	(1.8)
Voluntary	84	95	13.1	99	98	(1.0)
Proprietary	16	5	(68.8)	7	4	(42.9)
Governmental	13	13	.....	6	8	33.3
General	99	103	4.1	95	98	3.2
Special	14	10	(28.5)	17	12	(29.4)
AVERAGE SIZE:						
Voluntary	166.3	196.2	17.9	193.8	186.9	(3.6)
Proprietary	25.8	38.0	8.5	19.1	107.8	464.4
Governmental	306.9	318.8	3.9	724.0	539.5	(25.5)
ADULT BEDS:						
Total	18,373	22,971	23.8	23,664	23,065	(2.6)
Voluntary	13,970	18,637	33.4	19,186	18,318	(4.5)
Proprietary	413	190	(54.0)	134	431	221.6
Governmental	3,990	4,144	3.9	4,344	4,316	(0.6)
General	17,496	21,765	24.4	22,309	21,722	(2.7)
Special	877	1,206	37.5	1,355	1,343	(0.8)

Source: See text.

planning activities have a very slight positive effect upon the number of hospitals and hospital beds in an area.

An interesting aspect of Table II, however, is the measure of average size of hospitals. To begin with, hospitals (except proprietary) in the planned areas were of a somewhat smaller size on average than were those in the unplanned areas. During the course of the 12-year period in question, the average size of hospitals in the planned areas increased from this smaller base, while in the unplanned areas both voluntary and governmental hospitals decreased in size from a large base. One would expect that, with control of funds for construction and with general agreement on the fact that larger hospitals are superior to smaller ones, particularly in a metropolitan area such as those being considered, planning agencies would be very active and interested in increasing the average size of the hospitals. This could easily be done by simply making size a criterion in the approval of new construction proposals.

2. *Bed-Population Ratios*

There is almost total agreement that, on the national level, we need more beds. Jack Haldeman has said:

> We should not only maintain our present level of inpatient facilities, but we should also make provision for an annual increase in the number of beds provided per 1000 population [8:122].

Table III presents data on the bed-population ratios, both for total general and special hospital beds and for general hospital beds alone.

TABLE III

BED-POPULATION RATIOS: 8 SMSA's

	Planned Area			Unplanned Area		
	1952	1963	Per Cent Change	1952	1963	Per Cent Change
General and Special Hospital Adult Beds/1000 Population	3.8	3.78	(0.1)	4.30	3.48	(19.9)
General Hospital Beds/1000 Population	3.63	3.59	(1.2)	4.05	3.59	(11.4)
General Hospital Admissions/1000 Population	121.3	135.5	11.7	121.5	133.2	9.6

Source: See text.

During the period covered by the study, the planned areas decreased their bed-population ratios by 0.1 per cent for total hospital beds, and 1.2 per cent with respect to general hospital beds. The unplanned areas show decreases of 19.9 per cent and 11.4 per cent, respectively.

3. *Services and Programs*

In this section we shall look only at selected services and programs which can be, however tenuously, associated with the ideas of quality of care and duplication of facilities.

Quality of care is an extremely elusive concept, and nowhere in the literature is there a definition which is susceptible to measurement. The measures which have been suggested, such as tissue committee reports, medical audit reports, evaluation of a panel of physicians of the performance of an individual physician, etc. are not available to us in this study. Thus, as a very crude approximation, we will look at three factors: per cent of hospitals with internship programs, per cent with residency programs, and the per cent offering rehabilitation services. Table IV reports the data for the areas with respect to these factors.

It is argued that the existence of internship and residency programs enhance the quality of care in a hospital primarily in two ways. First, the fact that a number of reasonably (and, sometimes, highly) competent physicians are on the premises or available at all times makes it possible for the voluntary hospital to provide more intensive medical care for its patients than is normally possible with a non-full-time staff. Second, the presence of interns and residents is said to challenge the staff physicians to keep up with the latest developments and to interest them in their own continued growth. The per cent of hospitals with internship programs increased 21.9 per cent in the planned areas and decreased 5.0 per cent in the unplanned, while the per cent with residency programs decreased 8.6 per cent in the former and increased 7.6 per cent in the latter.

The availability of rehabilitation services can be considered an indication of higher quality of care in the sense that, if the role of the hospital as a medical center for the community implies availability of a complete range of services, a hospital must have a rehabilitation facility to fit this definition. In 1963, 17 per cent of the

hospitals in the planned areas and 18 per cent of the hospitals in the unplanned areas were operating rehabilitation programs.

Based on these figures, there would seem to be little significant difference between the areas with planning and the areas without it with respect to these extremly crude measures of the quality of care rendered.

With respect to duplication of services, the most hackneyed example is the "cobalt bomb." Presumably, in a highly populated metropolitan area, transportation facilities, etc., are such that infrequently-used treatment facilities could (or should) be centralized in a few large hospitals, and hence, the smaller the per cent of hospitals offering such services (down to a point) the better. Planning agencies themselves have frequently in their literature used isotope therapy facilities as an example of "unnecessary duplication."

TABLE IV

SELECTED HOSPITAL PROGRAMS AND SERVICES: 8 SMSA's

	Planned Area			Unplanned Area		
	1952	1963	Per Cent Change	1952	1963	Per Cent Change
Per Cent of General and Special Hospitals						
Internships	32	39	21.9	40	38	(5.0)
Residencies	35	32	(8.6)	39	42	7.6
Rehabilitation Services	.....	17	.....	.....	18	.....
Isotope Therapy	.....	33	.....	.....	33	.....
Schools of Nursing	30	28	(6.7)	40	30	(25.0)

In 1952, AHA reported, "all radioisotope therapy" and in 1963 only cobalt therapy, so between-years comparisons are not meaningful. It is interesting to note, however, that cobalt therapy was available at one-third of the hospitals in the planned areas and also at one-third of the hospitals in the unplanned. If "unnecessary duplication" were taking place in the absence of planning activities, one should observe a higher percentage in the unplanned areas.

We have also computed the per cent of hospitals with diploma schools of nursing. Leaders in the field of nursing education have expressed a desire to reduce the number of such schools, in the interest of improving the quality of nursing education. One might

assume that the fewer of these in a community, the better. On the other hand, one of the reasons hospitals continue to operate them is to provide themselves with a supply of graduate nurses, a very scarce commodity. As a result, planning agencies might not exert much pressure to rid the community of them, given a shortage of available nurses.

Though we include the factor, we restrain ourselves from drawing any conclusions regarding the differences between the areas with respect to it.

4. *Supply of Physicians*

It is not clear how planning agencies might affect the supply of physicians in an area. It may be that, as more hospitals and beds are built, more physicians come into an area, as has been held by some advocates of Hill-Burton legislation. It may be also that, as organized medicine becomes more and more interested in voluntary planning activities, the existence of a planning agency will become a positive factor in attracting physicians to an area. It is also possible that, through its own activities directed at obtaining community support and improving the status of health care in an area, it can exert some influence on at least the relative proportions of different kinds of physicians in an area, if not upon the total number.

Presumably, the number of physicians and physician-population ratios are highly correlated with the availability of medical care in an area. Furthermore, the proportion of specialists to general practitioners gives some indication of the nature of the health services system and its functioning, and may in addition be a further clue to the quality of care being rendered. A large number of full-time salaried physicians is likely to be an indication of the extent to which teaching and coordination activities are taking place in a community.

Table V shows data regarding numbers and ratios of physicians in the areas under consideration. With the exception of general practitioners, we will presume that the more physicians there are in an area, the better; and that the higher the physician-population ratio, the better.

Total number of physicians increased in both our groups: by 17.0 per cent in the planned areas and 15.8 per cent in the unplanned,

though the numerical increase was larger in the unplanned areas. The number of physicians in private practice increased slightly in the planned areas (by 4.5 per cent) and decreased slightly in the unplanned (by 4.2 per cent). Physician to population ratios decreased generally. With respect to total physicians, the ratio decreased by 7.1 per cent in the planned area and by 3.6 per cent in the unplanned. The ratio of physicians, in private practice to population decreased 17.4 per cent in the former and 20.8 per cent in the latter. It appears reasonable to assume from this that the existence of a planning agency has no effect either upon the number of physicians or upon the ratio of physicians to population.

TABLE V

NUMBER AND KIND OF PHYSICIANS: 8 SMSA's

	Planned Area			Unplanned Area		
	1952	1963	% Change	1952	1963	% Change
Total Physicians	8,091	9,465	17.0	10,697	12,390	15.8
Total Physicians/1000 Population	1.68	1.56	(7.1)	1.94	1.87	(3.6)
Private Practice	5,526	5,775	4.5	8,180	7,834	(4.2)
Physicians in Private Practice/100 Population	1.15	.95	(17.4)	1.49	1.18	(20.8)
General Practitioners	1,725	1,767	2.4	2,540	2,709	6.7
Specialists	3,571	4,008	12.2	4,640	5,125	10.4
Specialist/GP Ratio	2.07	2.27	9.7	1.83	1.89	3.3
Full-time Salaried Physicians	335	1,379	311.6	503	1,946	286.9
Ratio of Full-time Salaried Physicians to Those in Private Practice	.6	.24	300.0	.6	.25	317.0

The number of general practitioners increased in both areas (by 2.4 per cent in the planned and by 6.7 per cent in the unplanned) as did the number of specialists (excluding psychiatrists). For specialists the increases were larger, 12.2 per cent and 10.4 per cent respectively. The ratio of specialists to general practitioners increased also, by 9.7 per cent in the planned areas and by 3.3 per cent in the unplanned. Thus, while the number of general practitioners increased less rapidly in the planned areas, the number of specialists and the specialist-GP ratio increased more rapidly, an indication

that planning may have some influence upon the mix of physicians in an area.

With respect to full-time specialists, their numbers increased slightly more than three-fold in the planned areas and slightly less than three-fold in the unplanned, but while the actual increase was 1,044 in the planned areas, it was 1,443 in the unplanned. The ratio of full-time physicians to those in private practice increased by 300.0 per cent in the planned areas and by slightly more in the unplanned.

5. *Utilization Patterns*

Much has been written and much more could be said concerning levels of hospital utilization. The consensus is that there is no consensus concerning what is proper or optimum utilization. We have chosen several aspects of this amorphous area for examination and, perhaps, can make some definite statements regarding the desirability or undesirability of certain trends, despite the existing lack of agreement. Table VI displays our data.

It is difficult or impossible to say whether a given average length of stay is too long or too short. We have observed a decrease of 2.8 per cent in the average length of stay in the planned areas and a 3.5 per cent increase in the unplanned areas. These changes are small, and probably not indicative of any differences between the areas.

With respect to occupancy levels, it is probably safe to assume that, within limits, the higher the per cent of occupancy the better since typically, for a hospital of a given size, the average per unit cost of hospital care is minimized at an occupancy level of between 70 and 90 per cent. Thus, increases in occupancy levels represent a desirable trend. Furthermore, the shape of the distribution of levels of occupancy in various hospitals is an important consideration. The more hospitals which a community has operating at high levels of occupancy, and the fewer at low levels, the more effective the system is likely to be. We have therefore computed, along with average per cent of occupancy for the areas, the per cent of the hospitals operating at levels equal to or greater than 75 per cent, and the per cent of hospitals operating at levels less than 50 per cent during each of the two years in question. With respect to the area averages,

in the planned areas, per cent occupancy for all hospitals increased by 8.7 per cent during the period and in the unplanned areas by 15.0 per cent. In the planned areas, the per cent of hospitals with "high" occupancy increased 21.7 per cent, while in the unplanned areas, there was a much larger increase (42.8 per cent). With respect to "low" occupancy hospitals, planned areas experienced a 42.6 per cent decrease and the unplanned areas a 80.0 per cent increase.

TABLE VI

PATTERNS OF UTILIZATION

General and Special Hospitals

8 SMSA's

	Planned Area			Unplanned Area		
	1952	1963	Per Cent Change	1952	1963	Per Cent Change
Hospital Admissions/1000 Population	121.3	135.5	11.7	121.5	133.2	9.6
Average Length of Stay	8.54	8.30	(2.8)	8.46	8.76	3.5
Per Cent Occupancy	72.6	78.9	8.7	79.9	91.9	15.0
Per Cent of Hospitals with Less than 50 Per Cent Occupancy	12	7	(42.6)	5	9	80.0
Per Cent of Hospitals with More than 75 Per Cent Occupancy	46	56	21.7	42	60	42.8
Bed Concentration:						
(20 Per Cent)	8	8	.....	8	9	12.5
(50 Per Cent)	21	22	4.8	20	21	5.0
Admission Concentration:						
(20 Per Cent)	9	10	11.1	8	9	12.5
(50 Per Cent)	22	24	9.1	21	19	(9.5)

This means that the hospitals in planned areas are becoming much more homogeneous with respect to occupancy levels and no one or more hospitals have particularly high or low levels. Meanwhile, hospitals in the unplanned areas are becoming more heterogeneous—some are real standouts, and others are not. There is no ready explanation for this phenomenon.

Another measure used is a concentration ratio with respect to beds and admissions. This is expressed in the following way: "The largest —— per cent of the hospitals account for 20 (50) per cent of the beds." It is interpreted to mean that if, for example, the largest 50 per cent of the hospitals account for 50 per cent of the beds, all

hospitals are of relatively equal size. If, on the other hand, 10 per cent of the hospitals account for 50 per cent of the beds, there are a few very large, and many very small hospitals. Thus, the smaller the numbers shown, the greater the concentration. We assume that concentration of both beds and admissions is "good" based on our earlier discussion of the relation between size and quality.

During the twelve years in question, the per cent of hospitals accounting for 50 per cent of the beds increased by 4.8 per cent in the planned areas and by an almost identical amount (5.0 per cent) in the unplanned. The per cent of hospitals accounting for 50 per cent of the admissions, however increased 9.1 per cent in the planned areas and *decreased* by 9.5 per cent in the unplanned. With respect to beds, then, it would appear that there is no difference between planned and unplanned areas and, with respect to admissions, a superior pattern exists in the unplanned areas insofar as concentration is concerned.

Similar data relating to maternity service have been collected, though they are not presented in the interest of conserving space in this paper. The findings were similar to those dealing with adult beds.

6. *Costs*

The literature dealing with costs of medical care, and in particular with costs of hospital services, agrees on at least one point: costs are rising rapidly. This is, of course, to a great extent the result of forces in the economy and in the technological aspects of medical care and, as such, is not controllable from within.

Earlier some of the things which planning agencies can or should be able to accomplish were mentioned. One of the most frequently mentioned factors is costs. This control can be exercised upon building and, indirectly, upon operating costs through the prevention or encouragement of new construction. It can be obtained through the use of pooled services and provision of operating data and resulting improvement in financial record keeping. It should be built in to the goal of "stimulating the construction of needed facilities" and "avoiding the unnecessary duplication of highly specialized, infrequently-used, expensive facilities" [32:10]. In short, planning agencies should be able to exert an influence upon hospital costs. But, in our sample,

they have not been able to do so during the 12-year period involved. (Table VII)

Cost per admission increased by 97.0 per cent in the planned area and by 100.0 per cent in the unplanned. Cost per patient day increased 98.4 per cent in the planned area and 94.1 per cent in the unplanned. There was an increase in operating cost/bed of 154.2 per cent in the planned area and 168.7 per cent in the unplanned.

TABLE VII

GENERAL AND SPECIAL HOSPITALS OPERATING COSTS: 8 SMSA's

	Planned Area			Unplanned Area		
	1952	1963	Per Cent Change	1952	1963	Per Cent Change
Hospital Cost/Admission	$ 180.54	$ 355.72	97.0	$ 173.65	$ 347.39	100.0
Hospital Cost/Patient Day	21.63	42.92	98.4	20.59	39.98	94.1
Hospital Cost/Adult Bed	4,231.00	10,754.00	154.2	4,914.00	13,204.12	168.7

SUMMARY

It is premature to make explicit conclusions concerning the effectiveness of areawide health planning activities from the data presented. It is sufficient to note that, for the most part, the relative changes which occurred over the eleven-year period in the areas which had planning agencies were not very different from those which occurred in areas which did not. We have not computed the statistical significance of the numbers reported since, even if significant differences did exist between the two categories, we would be hard put to decide whether the change was "significantly" good or "significantly" bad. We can neither praise nor fault areawide health facility planning agencies on the basis of this study.

Its purpose is much more modest. It suggests merely that (1) evaluation of the effectiveness of planning activities is desirable and possible and (2) methodologies for such evaluation can and should be developed. The foregoing is, hopefully, a first step in such a development.

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