RICE UNIVERSITY

NEIGHBORHOOD HEALTH CENTERS
A STUDY OF ORGANIZATIONAL CONCEPTS

by

RAY KOHLER PARKER

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARCHITECTURE

ANDERSON TODD
Thesis Director

Houston, Texas

May 1970
ABSTRACT

NEIGHBORHOOD HEALTH CENTERS
A STUDY OF ORGANIZATIONAL CONCEPTS

Ray Kohler Parker

The health care system, relative to serving the needs of the urban poor, is at the point of crisis. The present emphasis in health planning has been directed toward more finances, manpower and resources - on extending and improving a basically sound system so that medical care can be offered faster and more efficiently to all sectors of the population. If you consider the effectiveness of the present system in terms of meeting the health requirements of one-fourth of the urban population, the urban poor, then the emphasis is questionable. In order to provide medical care to the medically disadvantaged, a radical reorganization of services is required. Decentralization of ambulatory care is an essential step toward meeting the basic health needs of the indigent and medically indigent.

This theses projects a method of decentralization by introducing a new element into the system, the neighborhood health center. The neighborhood health center would provide accessibility to comprehensive family-oriented care within a designated area. It would be a place for primary contact, an entry point into the health care system, with a means of referral of patients with acute or severe conditions to other community facilities for more-extensive and specialized diagnosis or hospitalization.
In order to provide a full range of medical services, the neighborhood health center would be linked into a total system of health care. This would require new concepts of organizing and providing medical services, including a new method to health planning, a change in the organization of services, a health information data system, a change in the education and orientation of health professionals, a method of organizing care areas, changes in the distribution of health services, and a means of implementing the entire system of health services. The integration of this type of organization and this new facility into a neighborhood could provide the impetus for the attack of other problems plaguing our urban system, those of an environmental, psychological and socio-economic nature.

The architect's responsibility, particularly in his concern for the environment, should be to help structure and establish principles of growth and change within the urban system. He must be cognizant of the many forces that act within society and be sensitive and responsive to them. As a potential leader in society, he must attain the capacity to work with and understand the other disciplines. This interdisciplinary contact has broadened the architect’s approach to solving problems and caused him to become involved in areas not traditionally thought to be within the scope of his practice. It is within this reference that the emphasis was determined for this thesis, a study of the neighborhood health center and the new concepts required in the organization of health services.
ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to the following people whose suggestions and criticisms were very helpful in the preparation of this thesis.

Mr. Anderson Todd, Director of the School of Architecture and Chairman of my Thesis Committee.

Mr. Jack Mitchell, Director of the Graduate Program.

Mr. Newell France, Administrator of Texas Children's Hospital.

Dr. Carlos Vallbona, Baylor School of Medicine.

I wish to also acknowledge the generous Fellowship awarded by Rice University, School of Architecture, for my year of graduate studies.

And to Stephanie, my wife, whose encouragement, love and typing made this all possible.
# TABLE OF CONTENTS

List of Figures .......................... vi

## Chapter 1. INTRODUCTION

- Criticism of the Present Health-care 'System' .......................... 1
- Study of Health-care Systems ........................................... 3
- Problem Definition in Architecture .................................... 9
- Statement of the Thesis ................................................ 10
- Definition of Terms .................................................... 12

## Chapter 2. THE NEIGHBORHOOD HEALTH CENTER

- Present Emphasis of Health Planning .................................. 15
- Proposal for a Neighborhood Health Center .......................... 16
  - Concept ......................................................................... 30
  - Objectives ..................................................................... 30
  - Example ......................................................................... 33
  - Needed: A Radical Re-organization of Medical Services ......... 35

## Chapter 3. CONCEPTS OF ORGANIZATION

- Comprehensive Neighborhood Health Planning ....................... 66
- Changes Required in the Organization of Health Services ........ 67
- Information System for Health Service Planning ..................... 74

- Information System for Health Service Planning ..................... 82
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Source of Health-care Expenditures</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>Distribution of Health-care Expenditures</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>Cost Index</td>
<td>7</td>
</tr>
<tr>
<td>4.</td>
<td>Population - Services - Prices Increase</td>
<td>8</td>
</tr>
<tr>
<td>5.</td>
<td>Poverty Areas: Houston, Texas</td>
<td>39</td>
</tr>
<tr>
<td>6.</td>
<td>Location of District Facilities</td>
<td>40</td>
</tr>
<tr>
<td>7.</td>
<td>Location of City Health Clinics</td>
<td>41</td>
</tr>
<tr>
<td>8.</td>
<td>Location of Hospitals in Houston</td>
<td>42</td>
</tr>
<tr>
<td>9.</td>
<td>Location of Private Clinics</td>
<td>43</td>
</tr>
<tr>
<td>10.</td>
<td>Population Trends</td>
<td>45</td>
</tr>
<tr>
<td>11.</td>
<td>Outpatient Visits</td>
<td>46</td>
</tr>
<tr>
<td>12.</td>
<td>Daily Patient Distribution</td>
<td>58</td>
</tr>
<tr>
<td>13.</td>
<td>Neighborhood Health Planning Model</td>
<td>73</td>
</tr>
<tr>
<td>14.</td>
<td>Health Information Exchange</td>
<td>85</td>
</tr>
<tr>
<td>15.</td>
<td>Distribution of a Variable in a Population</td>
<td>88</td>
</tr>
<tr>
<td>16.</td>
<td>Diagramatic Representation of Structure</td>
<td>112</td>
</tr>
</tbody>
</table>
Chapter I. INTRODUCTION

Criticism of the Present Health Care 'System'

Study of Health Care Systems

Problem Definition in Architecture

Statement of the Thesis

Definition of Terms
Chapter 1.

INTRODUCTION

The magnitude of the problems in the urban environment points up one important fact — that our technology and research capabilities have outdistanced our ability to serve the needs of people.

The architect's responsibility, as a potential leader in society, must be to help structure systems and establish principles of growth and change within the environment. He must be cognizant of the many forces that act within the society and be sensitive and responsive to them.

The architect must attain the capacity to analyze, coordinate, synthesize and evaluate all of the aspects of complex problems. This will require a comprehensive understanding of the problems and the ability to effectively work with and through other disciplines.

The realization of the need for multidisciplinary contact has caused the architect to become involved in areas not traditionally thought to be included in the scope of architectural practice. It is within this reference that the emphasis was determined for this thesis.

This thesis is a study of the health care system in relation to the most acute area of service — that to the urban poor. The need is shown for a new ordering
element, the neighborhood health center, and new concepts in organization that are required to incorporate this element into a comprehensive system of health care.

CRITICISM OF THE PRESENT HEALTH CARE 'SYSTEM'

The health care 'system' in the United States is a conglomeration of fragmented, inefficient, obsolete segments, existing independently, planned independently and financed inequitably. The managerial redundancy, inefficiency of service and the rapid rise in costs are indications of the approach of a complete breakdown in the delivery of health care unless radical changes are made.

In less than two decades, the nation's expenditure for health care has increased fivefold. (Figure 1.) Both inflation and rising demand account in part for this extraordinary increase. Some 40 percent of the nation's health bill is now paid by government - federal, state and local - through health programs for government employees, servicemen and their dependents, through state and city hospitals and by the Medicare and Medicaid programs administered by the Department of Health, Education and Welfare. Private health insurance pays about one-third of the total non-governmental portion of the nation's medical bill and individuals pay the other two-thirds. (1) The biggest factor in rising health costs is due to the growing use of increasingly expensive hospitals. This is directly related to the artificial stimulation caused by private insurance companies and by Medicare, which promote the use of the hospitals for diagnosis and treatment, because they will only pay for in-patient services. Many of these tests for diagnostic purposes and minor operations could be handled just as well and less expensively in
Figure 1.

SOURCE OF HEALTH-CARE EXPENDITURES
Figure 2.

DISTRIBUTION OF HEALTH-CARE EXPENDITURES
ambulatory-type facilities. Figure 2 shows the distribution of health care expenditures. Hospital costs are double the amount paid for doctor's services.

The cost of medical care was already increasing twice as fast as the cost-of-living index when the Medicare and Medicaid programs were introduced in 1966. Note the change in the ascent rate of 'hospital daily service charges' on the Cost Index graph, Figure 3. Physician's fees, which had been going up less than 3 percent annually, began rising more than twice that fast.

The explanation of the new increases lies not only in the added demand created by Medicare and Medicaid, but in the way the programs are run. Physicians are reimbursed on the basis of "usual and customary fees", and hospitals are reimbursed on what amounts to a cost-plus formula. The need for additional manpower to fill out forms and handle accounts aggravates the cost.

Rising prices, particularly in labor costs, are the biggest single factor in the nation's health bill. In 1950, the country spent $11.1 billion for personal health services. By 1969, the amount spent had climbed to $54.2 billion. The rise in population accounted for 17.6 percent of this increase, the additional medical services 35.3 percent and inflation, nearly half of the rise, or 47.1 percent! (Figure 4.) Some of the rise in medical costs has been inevitable, because the new life-extending techniques require more manpower and equipment. But the real propellant forcing up costs is the archaic manner in which health care is dispensed and paid for. (2) Rising health care costs are just part of the problem. Many Americans are dismayed and discontented by the way medical care is now
Figure 3.

COST INDEX
Figure 4.

POPULATION-SERVICES-PRICES INCREASE
being dispensed. Anger about the high payment for care that is impersonal and inconvenient is spreading.

But the most evident breakdown in the health care 'system' is the unavailability of care to the lower-income segment of the population. The medical care 'system' has never adequately serviced the poor because it was not designed to do so. The delivery of health care in this area is at the point of crisis.

A national commitment has been made to provide quality health care to all citizens, as evidenced by policy statements, legislation and funding. The primary emphasis has been toward extending and improving a basically sound system so that medical care can be offered faster, more effectively, more efficiently, and to all sectors of the population. Behind the emphasis on delivering improved care is the assumption that medically disadvantaged groups - primarily those in the lower economic bracket - can be reached without radical transformation of the system of medical care. This assumption is dubious if you consider the effectiveness of the present system.

STUDY OF HEALTH CARE SYSTEMS

Perhaps the investigation of medical care organization would be best accomplished by a physician, or someone in medical education, medical economics or medical administration. From the standpoint of investigation of pressing individualized problems this may be true. But it is also apparent that there is validity in studying the system from the outside, and particularly from the architect's viewpoint, for
his concern relative to policy-making, the method of approach, and key decisions at the initial planning stage are important in the development of overall objectives and comprehensive understanding of the total system.

In many fields there is an increasing tendency for interdisciplinary contact. There is a desire on the part of health professionals to analyze, plan ahead, and evaluate comprehensively, and to seek the cooperation and coordination of other disciplines. This is also true of architects who have become involved in other areas not specifically or traditionally thought of to be within the scope and control of architectural service. This concern for the total integration of objectives, planning, effectuation and evaluation has strengthened the bond of mutual contact.

Contact in itself will not provide interdisciplinary understanding. A common 'language' is necessary on both sides together with a feeling of mutual benefit in the process or in the result. The architect and the health professional should be interested in the primary area of the investigation — problem definition.

PROBLEM DEFINITION IN ARCHITECTURE

Just as there are no established guides for the planning of health care systems, there is no specific approach to problem definition in architecture. If fact, there is a great disparity in methods of problem seeking and definition used by individual architects and large architectural firms. This is due, in part, to the broad spectrum of architectural practice itself and the scope of the projects done.

On one end of the scale, practice can be highly individualized, with direct contact
with the client-user, with the clear definition of his needs and the problem itself, with a close association from beginning to end, and with observed evaluation after completion. On the other end of the scale, almost the opposite is evident. The practice may be by a large firm, with many generalized inputs, and multidisciplinary in nature. The contact with the client may be an association with a large group or corporation— and the users may be different than the client, both in person and need. There might be limited contact with and understanding of the total system in which the project will fit. And, there is an evident problem of evaluation, because in most cases, when the project is completed, the architect is seldom involved any longer. This lack of evaluation and feedback accounts for much of the repetition in thinking, not only in architectural problem definition but in the solutions presented. This is evidenced by the fact that almost any commission requires the architect to return to basic 'research' for problem definition. He does not have at his disposal the evaluative information and consequently no data accumulation for recurring problems of similar scope.

The increase in the complexity of problems and commissions has thus caused the architect to seek new approaches in his practice. Larger firms are becoming conglomerates in order to be able to provide the expertise to handle and define complex problems. The conglomeration process is not solely for the purpose of providing comprehensive in-house services, but is required for reaching even outside architecture to call on specialists in fields related, directly or indirectly, to the problem to be solved. The architect has gained an awareness of the need for interdisciplinary contact in the area of problem definition. He realizes that it is
no longer possible to wait until a 'client' has defined his needs in terms of a program or philosophy. In most cases, an entry into the process at a later time puts him at an extreme disadvantage in being able to effect change in program requirements because of the established basic policy. The architect must be concerned with the basic organizational concepts and the policy reasons behind key decisions.

In terms of comprehension of the problem, the architect (or architectural firm) must be able to understand (through some common language) the other disciplines, but more importantly, must be able to manage (analyze, coordinate, synthesize and evaluate) all of the aspects of complex projects through and with these many disciplines. He must be multi-disciplinary in his approach and thinking relative to the complete process of problem seeking, problem definition and problem solving.

STATEMENT OF THE THESIS

Decentralization of ambulatory care is an essential step toward meeting the basic health needs of the indigent and medically indigent.

Purpose of the Investigation

- To show that a new type of facility and new methods of organizing health services are required to respond to the health needs of the poor.
To show that there must be a system of communication and administrative functions linking the neighborhood facility to all other supportive facilities and, new approaches in planning and new concepts in organization will be required for this type of comprehensive care system to serve the needs of the poor.

DEFINITION OF TERMS

Bimodal - Overlapping of normal and abnormal factors in a specific distribution.

Comprehensive - Used in this study relative to health care means: all organized health services to an individual and his family in order that their health be optimally maintained so they may cope with the physical, psychological and sociological demands of the environment.

Cytology - The branch of biology dealing with the structure, function, pathology and life history of cells.

Epidemiology - The science concerned with the study of all the factors that affect the occurrence, distribution, and course of disease in a population.

Medicaid - An open-ended commitment by the federal government, jointly with the states, to finance through general revenues a wide range of medical services for the poor and the medically indigent.

Medically Indigent - Those whose incomes are too high to be classified as welfare patients, but who are judged too poor to pay for medical care.
Medicare - Medicare is not a health-care program, but a financing mechanism under which the Social Security Administration distributes money to insurance carriers, who in turn pay part of the medical bills for persons over sixty-five.

Multiphasic Screening - A method by which a series of presumptive tests, for the purpose of identifying previously unrecognized diseases or defects, can be done rapidly.

Outreach Program - A program designed for the purpose of extending a wide range of services to the population in conjunction with the health care program.
Chapter 2. THE NEIGHBORHOOD HEALTH CENTER

Present Emphasis of Health Planning

Proposal for a Neighborhood Health Center

Concept

Objectives

Example

Needed: A Radical Re-organization of Medical Services
Chapter 2.

THE NEIGHBORHOOD HEALTH CENTER

The neighborhood health center is a new facility type, oriented toward serving the needs of the poor within a defined health service area. It is a place to provide primary contact, as an entry point into the health care system.

In this chapter, a review of the present emphasis in health planning is presented to show the basic assumptions that are now in use, existing methods of organizing health services and current assumptions about lower-income patients. After establishing this frame of reference, a proposal for a neighborhood health center is developed. The example is based on the Houston Metropolitan area and shows the extent of the services to be provided, the staffing requirements and the program of spaces for a facility that would serve a determined number of people.

PRESENT EMPHASIS OF HEALTH PLANNING

The present organization of medical facilities is not conducive to providing adequate care to the lower socio-economic segments of the population. The fragmentation of facilities and services, both in their location and comprehensive-ness, is a major barrier to health care accessibility for these people. And the training and perspectives of medical professionals in the special skills required to provide the care is not oriented toward the poor.
The primary emphasis on health planning and the improvement of medical care and services, has been on the need for additional financing, manpower and resources. This involves the question of how the present medical organization can be added to, or altered, so as to provide health care to those not receiving it.

The current planning emphasis suggests three basic assumptions.

1. That there is basically nothing wrong with the present system of organization except that it is not extensive enough to reach all segments of the population.

2. What is needed is more financial support, more manpower, and more resources of various kinds (hospitals, equipment, supplies, etc.). Different groups of planners give different priorities to these, but all seem to think principally in these terms.

3. Re-organization in current terms means the improvement of efficiency of the present system - as in coordination of facilities and manpower, or the improved use of certain departments.

Existing Methods of Organizing Health Services

Alternative methods of organizing health services which serve predominately low-income groups is an increasingly important topic in the medical care field. This increased interest is a direct result of recent public exposures of the severe health and health service needs of the poor and the deficiencies of existing sources of health care for meeting the needs of this group. (3)
A term which is being used to advocate the expansion of the fee-for-service system of medical service is 'mainstream medical care'. But 'mainstream medical care' is a phrase like 'law and order'. Everyone is in favor of it but there are those who are also suspicious of the hidden meaning. Just as 'law and order' has been used by some individuals as a generally acceptable phrase to gain support of a certain segment of society, so the phrase 'mainstream medical care', while commendable on the surface, is often used to mean the status quo and resistance to any organizational change. Under the present system, 'mainstream medical care' does not effectively include the urban poor in the provision of health services. (4)

In order to understand the alternative methods of health service systems now in effect, a description of the various organizational models is presented below. When considering these models in the light of services provided and service area included, it is obvious that they fall short of solving the pressing problems of today. Some of the disadvantages to each type of model are also listed for the purpose of understanding these shortcomings.

The models included in this description are Solo Practice, Solo Practice with Outreach Program, Organized Solo Practice, Group Practice, Group Practice with Outreach Program, Volunteer Clinics, Health Department Clinics, Outpatient Departments of Teaching Hospitals, and Existing Neighborhood Health Centers.

Solo practice. The physician functions as an independent practitioner. The 'Family Doctor' type of service to the poor is inadequate to any significant
degree because:

1. Physicians are not attracted to poverty areas in sufficient numbers to be effective.
2. Lack of access to social service programs make payment for service difficult.
3. Absence of communication with specialized facilities tend to decrease adequate referral techniques.
4. Responsive action to community health and environmental health is virtually impossible.

Solo practice with outreach program. Independent practitioners working by mutual agreement to participate with an organized Outreach Program to provide greater health service to a neighborhood or community. One such program is sponsored by the Public Health Service called 'Partnership for Health'. (5) Service at best is fragmentary because:

1. Patients have uncoordinated system of health care relative to specialists, tests, and total health care.
2. Agencies conducting Outreach Programs are seldom based in the area they service, hence there is little community participation or involvement.
3. This causes a lack of understanding of methods and approaches to receiving health care.
4. Follow-up is difficult to coordinate.
5. Lack of any good organizational framework for the medical care portion
of the program hinders adequate communication and tends to make the Outreach Program little more than a community information service.

Organized solo practice. One method of organizing solo practitioners is through the use of a nonprofit corporation closely related to but not completely controlled by the medical society and subscribed to by community residents. This type of organization provides the administrative mechanisms that can relate to Outreach Programs, home care programs, and other special services which should be closely linked to primary care. This system can insure accountability for quality and reasonable cost of services. One such program that has managed this successfully is that conducted by San Joaquin County, California. (6) Another successful adaptation of this principle is the system started by The United Mine Workers Welfare and Retirement Fund. (7) The Fund assumes the responsibility to seek out the best talent and facilities available, examines closely the quality of care which it purchases and sets performance standards to insure quality. These programs, though successful, are limited to particular situations and are not universally adaptive to low-income urban neighborhoods because:

1. Problems arise in attempting to link Outreach Programs and ancillary services to the source of primary care.

2. A general lack of social stability in many low-income areas would make indigenous consumer control of this kind of plan difficult.

3. Prepaid and share-fund arrangements invariably carry stipulations limiting the amount of payment for care, length of care, and thereby are directed more toward limited primary care than any comprehensive program of
health maintenance.

4. Access to a one-door policy of comprehensive health care is virtually impossible, because many physicians and services are approved for the program.

Group practice. There are a number of examples of proprietary groups and partnerships that exist to serve the people in low-income neighborhoods. These have been made possible by the Medicaid program which allows payment for fees and services. The disadvantages of such practices relative to providing health care to the poor are:

1. Lack of coordination with other components of the health care system.
2. Difficulty of referral, to any significant degree, to Outreach Programs.
3. Although primary care can be effectively handled, the other health needs of the family such as health education and environmental health are seldom considered.
4. There is little possibility of assessment, accountability, or evaluation of care on a community-wide basis.

Group practice with outreach program. Programs for poor people which include prepaid insurance systems similar to that of Organized Solo Practice have also been successfully implemented for Group Practice. These programs are usually designed to include larger segments of the population other than just the poor and contain a sub-program of medical care to serve low-income neighborhoods. The most successful and widely known program of this type is the Kaiser Permanente Medical Group
in Portland, Oregon. (8) Here, the Outreach Program is a separated component made necessary by the nature of the medical care setting and the clientele. The disadvantages of this system are:

1. The Outreach Program tends to take on the characteristics of a home health agency.

2. No differentiation is made by the group between patients receiving and not receiving aid in payment, thereby making coordination with Outreach Programs difficult.

3. It becomes impractical to integrate an Outreach Program with the larger medical care program except in a somewhat superficial and sporadic way (for instance, through occasional conferences, staff education programs).

4. And this type of organization does not lend itself to the community involvement necessary for comprehensive care because it serves all segments of the population and has no direct focus on the poor.

Volunteer clinics. This solution has been tried in a number of places. Some of the Student Health Organizations and Student American Medical Association Chapters are sponsoring such clinics in communities adjacent to their schools, mostly as missionary efforts stemming from student zeal to do something about the deplorable situations which they see in these communities. While this pattern works well where physician tenure is unimportant with small temporary population groups, Volunteer Clinics do not work as well in permanent situations. (9) The disadvantages of such a solution are:

1. The reliance on volunteer physicians makes it necessary to operate these
clinics only infrequently and at odd hours.

2. There is less possibility of insuring adequate accountability for the quality of medical care rendered by volunteers.

3. In most cases, these clinics are well-meaning 'gestures' and not permanent or even adequate solutions to the problems. (10)

Health department clinics. Another possible organizational arrangement is to provide services for the poor through health department clinics which are made less categorical. That is, well baby clinics which treat sick babies as well, special clinics for the aged which treat the less aged, diabetes detection clinics which combine with other specific disease-oriented clinics in order to provide a semblence of comprehensive care with minimal fragmentation. These solutions, evidently, are not adequate. Other disadvantages include:

1. Public health departments have difficulty attracting full-time physicians.

2. When they are employed, their tenure is likely to be short.

3. The impossibility of rigid bureaucratic structures of long standing make it difficult to change the organizational pattern of the clinic.

4. The image of what health departments are, how they operate, and what they should contain is not very amenable to change.

Outpatient departments of teaching hospitals. Most all Teaching Hospitals have an organized 'Outpatient Department'. This is a necessary segment of the teaching process in order to provide sample patients for the students. Many such outpatient units, for this reason, are particularly oriented toward extreme attention to
ailments that are clinically interesting and less responsive to more common ailments and problems. However, the existing organization and the increasing interest in community makes this type of system an easy entry-point into the comprehensive care concept. Many teaching affiliated outpatient departments are in the process of reorganizing to develop systems of comprehensive care. The changes include promotion of the idea of a split system in the emergency room to separate medical emergencies from the walk-in patients who are increasingly using the emergency room as a primary after hours source of care; use of full-time physicians or at least long-term rotations for resident house staff physicians; organization of physicians into 'mini-groups' or 'caring units', each with a fairly permanent clientele; orientation away from primary emphasis on teaching to the efficient delivery of good patient care; a more precise appointment system; add-on programs including some kind of outreach service to the community; and devising a method for gaining the participation of the people living in the community served with program planning and advice on operations.

Obviously, this reorganization would be a step in the right direction. And the teaching hospital could provide the example and impetus for development of other comprehensive care systems. But there still are the disadvantages:

1. The location of the hospital might be central in many respects but inaccessible to the largest segment of the population needing services.

2. An outpatient department thus removed from the immediate area of service has difficulty in promoting any strong detection or evaluative system.

3. Even though the out-patient department and the hospital can offer an
almost complete system of acute and rehabilitative services, other necessary components of comprehensive care such as environmental health, dental health and so on are neglected.

Existing neighborhood health centers. All of the preceding models, in spite of their good points, have shortcomings when viewed in the sense of comprehensive care. A necessary and certainly obvious extension of the health care system is the development of a new organizational model, one which provides the care to the people who need care, where they need it, and in a continuing and comprehensive manner. The program sponsored by the Office of Economic Opportunity is perhaps the most enlightened method of achieving this goal. This is a program which provides grant assistance to set up what they normally term, 'Neighborhood Health Centers'. Most of the centers in existence have been organized along the lines of a group practice model with an extensive outreach program closely integrated. Family health workers, who live in the community served by the program, function as a combination public health nurse, social worker, and legal aide. Each works in a team with a public health nurse and a physician. The family health worker has a smaller patient load and therefore is more intimate and has more frequent contact with the patient and family than the other members of the team. Each public health nurse supervises a small number of family health workers. A physician also works with a number of different family health workers. The team's direction comes not from the physician but from the public health nurse, who by training and experience is the team member most able to understand the work of the other two. Frequent family conferences serve to make all members of the team
aware of the problems from each team member's special vantage point. In this way, family health workers in time become rather sophisticated lay medical workers and physicians become well acquainted with the social and family situations which complicate the patient's response to the usual therapeutic regimen. Medical needs in this setting are seldom unrelated to social needs and are virtually never unrelated to conditions in the home and to other family members.

There are many other examples of comprehensive health services programs that have been established in the past four years. (II) The programs vary widely, serving populations from 6,000 to 50,000. Most centers are comprehensive in the sense of having at least an organized source of primary care plus certain add-on services. But comprehensive means the total integration of a complete system of medical care, within the context of the center itself and as related to all supportive facilities. The disadvantage of 'a' center or 'a' program is the lack of this total integration and multiplicity of centers that could serve the needs of all the people who require this kind of care.

Assumptions About Lower-Income Patients

Health professionals assume a certain kind of patient as well as the existence of certain relationships between the patient and professionals. For example, the patient is supposed to have his own self-interest at heart, so that when he suspects he is sick he will seek professional help, and, when given a regimen to follow, will attempt earnestly to follow it. He is assumed to be an active agent: he has to make decisions as to when and how to seek health services and then organize his
life in order to manage a medical regimen. He must trust the professional and return for additional care if the symptoms reappear or worsen.

Lower income persons seldom fit the assumptions of the health professional. They invariably come for care with symptoms in advanced stages, they return with the same diseases after treatment or temporary arrestment, or with more complex symptoms. They cannot follow even simple regimens either because of non-comprehension or environmental difficulty.

Distinctive experience. The lower-income person's experience of himself and his world is highly distinctive - in the sense that he has a concentration on the 'deadly earnest' present. His problems are crisis-dominated in character. This pervasive problematic character of life tends to make unreal the careful and solicitous attitude toward health held out by the health professional. Such concerns often seem empty or minor to lower-income people who feel they are confronted with the more pressing problems of daily living. They will often be inclined to slight physical difficulties in attending to the more immediate problem of making ends meet during a particular day or week. Their health problem is just one crisis among many with which they must try to cope.

Households tend to be understaffed. Another very general characteristic is that lower-income households tend to be understaffed. The complement of family members, including the husband and wife, is more than often absent. This is caused in part by separation, non-married parents, or simply by the fact that both parents must work to provide the bare essentials. Each individual's health within
the family receives relatively little attention. When someone is sick it is more
difficult to care for this person at home. If the main family member is sick, he or
she can find little time to seek medical aid. And, the family is more tolerant
toward chronic illness. Lower income people tend to accept ailments fatalistically
or as natural to living and aging. Their attitude toward health is displayed in the
care of their children - where allowances are made toward physical disability and
malfuctioning of bodily processes. Parents often seem indifferent even to obvious
infections, sores and colds. This acceptance of something short of good health
points up the need for health education.

Health education not advanced. Health education is not at all advanced among
lower-income groups. Since illness is not usually self evident except in the very
late stages, health education is of considerable importance in recognizing illness.
This is particularly so of relatively mild or episodic chronic disorders that do not
fully incapacitate or do so only temporarily. And generally, when illness is
perceived, lower-income people are less inclined to use medical institutions but
treat themselves with patent medicine or folk remedies.

Behavior in medical settings. The difficulties of lower-income people are com-
pounded by how they tend to behave in medical settings. Their behavior is often
frustrating and annoying to medical personnel, for they frequently violate expecta-
tions about how 'good' and 'considerate' patients should behave. They often lack
punctuality in keeping appointments, expect walk-in emergency treatment on
demand, lack good personal hygiene, give inadequate health histories, and do
not discriminate experience by conventional disease labels.

The lower-income patient feels inferior when confronted by the questions asked by medical personnel. This is noted by both a passive submissiveness and almost hostile evasiveness toward the medical staff members. The socio-cultural subordination is re-emphasized by his economic subordination. Since he is receiving free, or almost free, treatment, he is required to be grateful, subject to the convenience and requirements of those giving service.

**Tendency to personalize relationships.** Another aspect of lower-income people that is consonant with their behavior outside of medical settings is a tendency to personalize most relationships. They do not respond well to a properly professional 'impersonality', but seek out personal relationships, rather than professional ones, with staff members. When the contact is made with a different professional each visit, the patient gets frustrated and often does not return.

The professional sometimes assumes he knows a great deal about the neighborhoods and family settings of lower-income patients - when in reality he does not. Professionals will also assume they know what is good for these patients - knowing they are the experts and the patients are unknowledgeable and sometimes uneducated.

The traditional planning approach and the present emphasis makes some of these types of assumptions when attempts are made to solve the problem by adding to the system - a rehabilitation center, a day-care center, an alcoholic clinic, and so on.
Funds are sought on an ever-increasing basis to further this system of expansion – without any real focus on total organization in the light of what life is actually like for these lower-income people.

PROPOSAL FOR A NEIGHBORHOOD HEALTH CENTER

Concept

The concept of the Neighborhood Health Center as an integrated total-care facility began in 1961 as an experiment by the New York City Department of Hospitals. The old Gouverneur Hospital on the lower East Side of Manhattan was converted, under the direction of Dr. Howard Brown, from an inadequate inpatient institution into a large ambulatory care facility. Through the voluntary hospital affiliation plan, Gouverneur was affiliated with Beth-Isreal Medical Center. This provided a basis for recruiting highly qualified medical personnel who could provide a comprehensive scope of out-of-hospital services under one organizational framework. (12)

In 1964, the Economic Opportunity Act was passed which provided grant assistance, under the General Community Action Programs section, for demonstration programs in different areas of social importance including health care. It was under this program that in 1965 Drs. Jack Geiger and Count Gibson of the Tufts University Medical School proposed a demonstration project for providing comprehensive care. The project was a smaller, more compact version of the Gouverneur idea in an isolated public housing area on a peninsula in Boston harbor called Columbia Point. (13) The concept included not only primary medical care, but many other health related
activities such as health education, school health services, environmental sanitation, recreation, and community action for social change using health care as an entering wedge.

Soon afterwards, the Denver Department of Health and Hospitals received a similar grant to set up a pilot program on the east side of Denver. (14) And grants followed in rapid succession to Beth-Isreal in New York City to expand its services and community outreach program, to Mount Sinai and St. Luke's Presbyterian Hospitals in Chicago, the University of Southern California in Los Angeles, and Montefiore Hospital in New York City.

In 1966, on the basis of the promise offered by the program already in operation, an amendment to the Economic Opportunity Act was made which authorized OEO to establish the Comprehensive Health Services program as a national emphasis program. (15) This included the setting up of Neighborhood Health Centers as a means of providing health care to the poor.

During the next two years, many other programs were funded, mostly patterned along OEO guidelines based on the early experience of the Gouverneur, Denver and Columbia Point models. The sponsorship of the programs varied widely, and for a purpose—this program was new and testing of all the possibilities for health care was a major consideration. Some were sponsored by voluntary teaching hospitals, such as Montefiore in the Bronx, Beth-Isreal in Manhattan, and Mt. Sinai and St. Luke's Presbyterian in Chicago. A nonteaching hospital, Provident in Baltimore, also operates a program. The San Francisco Medical Society and the Atlanta, Georgia
Medical Society both sponsor neighborhood health centers. Tufts University Medical College sponsors two programs, the one at Columbia Point and a rural program in Bolivar County, Mississippi known as the Tufts-Delta Program. Other medical schools sponsoring OEO programs are Meharry in Nashville, Tennessee, and the UCLA Watts neighborhood program.

Prepaid group practices also sponsored programs, including the well known Kaiser Permanete Group in Portland, Oregon and the Bellaire Group of Bellaire, Ohio. A fee-for-service group in Monterey County, California also operates a program.

Some centers are sponsored directly by the Community Action Program in their locality, like the Raleigh County Program in Beckley, West Virginia. A program in Alviso, California is operated by the community corporation.

The Public Health Service evidenced wide support for neighborhood health centers, particularly in their 'Partnership for Health' project grants authorized by Section 314 (e) of that Act. Under this program, project grants were made some jointly with OEO for new programs of community health services.

The variety of sponsorship was conscious design on the part of OEO. The basic problem to which the neighborhood health centers are addressed is the almost total lack of primary medical care resources in communities where the poor live in greatest numbers. Therefore, a great deal of experimentation and demonstration using different kinds of resources has been done, with the hope that some clear-cut patterns would emerge that could define the more successful approaches to the
Objectives

The objective of the Neighborhood Health Center program is to improve the health care of poverty populations by making available comprehensive family-oriented health service within a designated neighborhood. The Center should encompass all aspects of health care including environmental, psychological and socio-economic factors. The availability of preventive, diagnostic, consultive and therapeutic services including home follow-up of minor and chronic illness enables the Center to provide most care on an outpatient, ambulatory basis. The Center, to be comprehensive, must include the integration and coordination of all existing community support facilities.

The Neighborhood Health Center should emphasize family-oriented services, both professional and supportive. It will frequently serve as an entry point for an attack on other problems. In order to effectively serve the needs of a neighborhood or 'community-of-care', certain fundamentals must be considered in the development of objectives. (18)

Initiation. The most outstanding characteristic of disadvantaged groups is their inertia or inability to initiate the search for aid. Failure to appreciate this has been the primary reason why many programs designed to offer medical care to these groups have failed. This may be obviated by a community-oriented 'Outreach Program' which can motivate the individual as well as the group to utilize
preventive and therapeutic services.

**Continuity and coordination.** Access or referral to inpatient services as well as ambulatory services must be available. Most existing health facilities offer fragmented, uncoordinated and episodic care. Failure to continue and coordinate the care of the patient when hospitalization is needed represents medical abandonment. For this reason, it is necessary that the Neighborhood Health Center be closely affiliated with hospitals, and the staff closely coordinated.

**Completeness.** In order to assure comprehensiveness of care, all types of services must be made available; episodic care of acute illness and injury, health evaluation and preventive care, rehabilitation, health education, environmental health, and life adjustment service.

**Family-oriented.** Facilities and services should be available to take care of all members of a family. Since the center will be the place, in many cases, for primary contact of people seeking health care, it seems that enrolling the entire family at the time of first contact, would be essential.

**Availability.** The Neighborhood Health Center would have the distinct advantage of being located within the area it serves. The guideline set up by the Office of Economic Opportunity proposes a limit of not more than 25,000 people per center. Even with this number, the center could be made identifiable. Availability would certainly be increased over what is presently provided, but effectiveness of use could only be made through the inclusion of other segments of the program like
transportation means, day care centers and other support facilities.

**Permanence.** The concept of permanence must be promoted through the organization of services and involvement of community. Permanence should not be construed as immobile building structures, but of lasting organizational structures. (19)

These are basic objectives. They are general ideas on which to establish a framework for more specific requirements. The complexity of the concept of comprehensive care presents many parameters, and identification of the many variables must be made if an effective program is to be planned.

**Example**

In order to understand the requirements for a Neighborhood Health Center in more specific terms, an example of the organization required for developing such a facility is reviewed in this section. Specific locations are not shown, but the proposed example is based on a facility serving 8,000 families or approximately 25,000 people. The first part gives general background data on the Houston Metropolitan Area which points up the basic need for this type of facility; following is an enumeration of the Services to be Provided, a Staffing Model to provide these services and the Program of Spaces based on the population size.

This example is also shown for the purpose of understanding the scope of a facility organized to provide comprehensive services to a segment of the population this size. The availability of preventive, diagnostic, consultive and therapeutic services including home follow-up of minor and chronic illness enables the
Neighborhood Health Center to provide most of the care on an outpatient, ambulatory basis. The key to providing the full range of comprehensive services is the availability of other support facilities for hospital care and specialized-clinic care, and a referral system made possible through the primary-contact Neighborhood Health Center.

**Background Data: Houston Metropolitan Area**

Houston is not unlike many other metropolitan areas that have had rapid and continuous growth. With that growth has also come geographic dispersion, which has had a profound influence on all the population, but particularly detrimental effects on the impoverished. To analyze some of these effects, the background of health service provided must be reviewed in relation to the Facilities Available, Population Trends, Characteristics of the Population, Requirements for Health Care, Access to Health Care and Other Characteristics of the poverty areas that have implications for understanding health care needs.

The determination of poverty in terms of minimum income is not an adequate indicator in itself because of the variations in family size. However, for the purpose of understanding the magnitude of the poverty problem, the map, 'Poverty Areas', indicates areas of median family income of $4,000 or less. (Figure 5.)

**District facilities.** The Harris County Hospital District is the organization having the major responsibility for providing health and medical care to the poor residing in the Houston Metropolitan Area and the rest of Harris County. Services are
provided by the District at Ben Taub General Hospital, Jefferson Davis Hospital, The Settegast Clinic and The Baytown Clinic. Ben Taub, as a general hospital, provides both general and highly specialized services to both inpatients and outpatients. The services of Jefferson Davis Hospital are more specialized inpatient services including obstetric care, newborn care, tuberculosis care, chest care and rehabilitation care; out patient services consist of prenatal care, postnatal care, maternal health care, high risk maternal care, tuberculosis and chest disease care. The Settegast Clinic offers first-contact ambulatory care to those residing in the Settegast neighborhood. Similar services are offered by the Baytown Clinic for residents of the city of Baytown and surrounding communities. (Figure 6.)

City of Houston health department facilities. The Houston health department offers programs in maternal and infant care, communicable disease control, child health care, family planning counsel, health education, and adult health screening.

These health clinics provide good access to public health care, but are established primarily for disease prevention and detection services, and not ambulatory care for medical and surgical cases, and not on any comprehensive or continuing basis. (Figure 7.) And, they are open only during normal working hours which further restricts the use by many people.

Other facilities and services. There are other facilities and programs that provide services to the poor. (Figure 8.)

Volunteer Hospitals – offer some out-patient and in-patient care; but they are loosely organized in terms of providing services on any effective basis to the
major poverty areas.

Private Hospitals - are by nature proprietary and not oriented to serving the poor; consequently, have little effect in caring for any major portion of the indigent load.

Harris County health department clinics. The County provides services in communicable disease control, immunizations, epidemiology, chronic disease control, supervision and conferences in nursing homes and custodial homes for the aged, TB control, prenatal and postnatal maternity services, child health services, crippled children's services, cancer control, cardiovascular disease control, mental health services, dental health and veterinary medicine. Again, through the list of services is impressive, the poverty areas do not have access to them for the most part.

Private clinics. Many private clinics are located in or near poverty neighborhoods. (Figure 9.) However, they are also proprietary in nature, and like the private hospitals only care for a small portion of indigent cases.
Figure 5.

POVERTY AREAS
Houston, Texas

Income Key:

- $4000/yr. or less per family
- 1/3 of families less than $4000/yr.
Figure 6.

LOCATION OF DISTRICT FACILITIES

1 Ben Taub Hospital
2 Jefferson Davis Hospital
3 Settegast Clinic
4 Baytown Clinic
Figure 7.

LOCATION OF CITY HEALTH CLINICS

Source: City Health Department
Figure 8.

LOCATION OF HOSPITALS IN HOUSTON

Source: American Hospital Association Guide, August 1967
Figure 9.

LOCATION OF PRIVATE CLINICS

In or near poverty neighborhoods, 1967.
Source: Harris County Hospital District.
**Population trends.** The Houston Metropolitan Area has experienced phenomenal growth in the past few years.

- Higher growth rate during the ten year period from 1950 to 1960 than any other major metropolitan area of similar size.
- Present population is estimated to be 1,600,000 or nearly twice the 1950 population.
- The population is expected to be 3,150,000 by the year 1990. This would represent an increase of ninety percent (90%) over the present population. (Figure 10.)

**Characteristics of the Houston metropolitan area population.** Accompanying the rapid growth of the Houston Metropolitan Area are many problems.

- One-fourth of the population is poor.
- Poverty areas are not geographically confined to the city core, but are spread over a large area.
- Health problems are far greater in the poverty areas.
- Future growth is anticipated in the peripheral areas, far removed from present district hospital facilities.
Figure 10.

POPULATION TRENDS
Figure II.

OUTPATIENT VISITS

Source: Booze, Allen, Hamilton Report
Requirements for health services. The hospital district will be responsible for the health services of a significant number of poor people in the next ten years.

- Health service will be required for more than 300,000 people by 1980, based on the current poverty population.
- Acute care bed needs will require the addition of approximately 5140 beds by 1980. This will call for extensive development of new hospitals and adding additional space at present facilities. Of this number approximately 1415 beds will be required for the poor.
- Along with increased acute care beds will be the need for an increase in hospital-based programs and services.
- There will be a need to provide for approximately twice the present out-patient visits by 1980. At present, the district provides for 317,000 out-patient visits. (Figure II.)
- At present, there is an excess in long-term care beds as evidenced by a stable 70 to 75 percent occupancy. The only requirement in this area will be the need for a referral system to provide for the use of the long-term care facilities.
- Mental health services for the poor will require approximately 24,800 in-patient care-days and approximately 22,350 out-patient visits by 1980.
- The requirements for rehabilitative care are extensive at present and are expected to increase along with the other services.

Access to health facilities and services. Some of the problems confronting the district in the provision of health care are directly related to access.
Significant transportation problems face the poor in their attempts to reach district facilities.

Automobiles are the major source of transportation now used, but if a family owns a car, it is frequently the only means of getting to and from work and unavailable for use during the day.

Public bus transportation is costly and time-consuming. The system provides only limited service between poverty areas and district facilities, and in most cases requires one or more transfers, at a round trip cost as high as $1.30 per person.

The district hospitals are not within walking distance from poverty areas. Jefferson Davis is more strategically located but only accessible to a few. Major poverty areas are three to twelve miles from Ben Taub and five to fifteen miles from Jefferson Davis.

The district operates two ambulances and three station wagons for transporting in-patients from one facility to another. However, the service is not available for general patients.

Private ambulance service is too expensive to be within the reach of poor people.

Other characteristics of poverty areas. There are many other factors that compound the health problems of people in poverty areas. These factors might also be considered as contributing characteristics to the inaccessibility of, the understanding of, and the provision for, health services to the poor.

Below-average income - the median income for the Houston Metropolitan area
is $6,040 (1960 census). Over 25 percent of the families living in the areas shown on the previous maps as poverty areas have incomes below $4,000.

- High unemployment – current estimates indicate the unemployment rate is 2 percent for the Houston Metropolitan area and three times that rate, or 6 percent for the poverty areas (Texas Employment Commission estimate). Underemployment is another problem, indicated by the below average income.

- Low educational level – The adult population in Houston had completed 11.3 median years of school (1960 census), contrasted to 6.7 median years of school in the designated poverty areas.

- High percentage living in substandard housing – 15.3 percent of all occupied housing units in the Houston Metropolitan Area were classified as dilapidated or deteriorating as compared to 42 percent in the designated poverty areas.

- Intense health problems – The health problem in the poverty areas are extreme when compared to non-poverty areas. As an example, infant mortality rates are 43 percent higher; mortality rates for heart disease are 80 percent higher, and for cancer 50 percent higher than the rest of the metropolitan area. Chronic illness and disability is 15 to 20 percent higher in the poverty areas.

The health needs. The provision for the health needs of 25 percent of Houston's population is evident. The almost overwhelming growth potential further aggravates the condition of the present system of health care. The system in its present form is inadequate in terms of meeting the needs of this segment of the population.

The example that follows is shown in three parts, the Services to be Provided, a
Staffing Model, and a Program of Spaces. It is based on the needs of a segment of the poverty area, serving a maximum of 25,000 people.

Services to be Provided

There are many ways of providing health services to a neighborhood or 'community of care'. However, without organization into a total system of care, these services, at best, are fragmented and far from comprehensive. The establishment of a comprehensive care program is understandably the most appropriate solution in meeting the health needs of an entire community. Such a program must also be designed to provide organized health services to the individual and his family so that they may cope with the physical, psychological and sociological demands of the environment. To be comprehensive, the program must include the following elements:

**Acute care.** Primary or first-contact care; facilities for examination and diagnosis of patients, including laboratory services, x-ray and ECG; treatment for the majority of problems that patients have; referral of patients with severe conditions to other community facilities for more extensive and specialized diagnosis or hospitalization.

**Anticipatory and functional management of chronic illness.** Coordination of services for patients at all levels; anticipatory management effected by periodic check-ups; functional management of chronic problems including treatment of relapses and complications.

**Preventive care.** Physical examinations, immunizations and well baby care for
children; medical and dental examinations, early disease detection, health education-preventive care programs for adults; evaluation of the individual and family in terms of total care.

Rehabilitation services. Physical and occupational rehabilitation programs including therapy at the center and home treatment; specialized rehabilitation by referral to existing programs; coordination with established vocational rehabilitation programs.

Dental care. Dental examinations, diagnosis, treatment planning, elimination of pain and infection, restoration of teeth, replacement of missing teeth, and treatment of malocclusion and peridontal disease; close coordination with medical care to ensure total health care and evaluation.

Audio-visual care. Detection of audio-visual impairments; examination by special team, otolaryngologist/audiologist or ophthalmologist/optometrist; hearing aids and glasses made available through the Center.

Nutrition information services. Nutrition and diet consultation services; educational program in conjunction with health education, focused on home and family life improvement.

Mental health care. Detection of mental and emotional health problems; referral to existing programs for provision of specific services; analyze and evaluate mental health problems in the neighborhood.

Health education. Foster the formation of community health associations; training
of local residents as community health assistants; promote active involvement of local residents in ways which will change their knowledge, attitudes and motivation; program to include health education classes at the center and school-coordinated programs and activities geared to special health and community health problems.

**Environmental health service.** Work toward improvement of the environment through surveillance of the neighborhood by close association with the City Health Department; improvement of the standard of health through educational and detection programs to improve neighborhood conditions.

**Life adjustment services.** Social service worker coordination to provide access to community agencies; evaluation of patients' needs provided by outside agencies.

This system of services includes all of the preventive, diagnostic, consultive and therapeutic elements including home follow-up of minor and chronic illness. The Neighborhood Health Center could effectively provide all the care required for ambulatory and outpatient-type needs, or 95 percent of the health-care problems encountered in the neighborhood.

**Staffing Model**

To provide all of the required health services just enumerated, consideration of the staffing requirements will be made based on a proposed system for Neighborhood Health Centers done by the Harris County Hospital District.

The responsibility for supervision of the overall program will be done by a District
Council, represented in each neighborhood health center by a Project Director. Besides working closely with District Administration, the Project Director would coordinate the activities of the Center through a Physician-in-Chief and implement operational guidelines in cooperation with a Neighborhood Health Council. The Neighborhood Health Council would be a group of elected representatives from the designated area concerned about the planning, development and operation of the Neighborhood Health Center. This Neighborhood Council would also be the representative body that would serve on the District Council. This would provide the neighborhood with direct representation in the planning and implementation of all programs. The Physician-in-Chief would be responsible for the administration of the Center. He would maintain close association with the many existing service agencies by means of an Agency Advisory Council. This Agency Advisory Council would be composed of representatives of each of the agencies that provide direct or indirect services. To properly coordinate all the many services proposed, various teams would work under the direction of the Physician-in-Chief. These teams would be Administrative Staff and Special Teams, Core Teams, Consultant Teams and Community Teams. Each of these teams would have specific functions to perform in providing the program of comprehensive care that is required. The teams would be composed of specialists, each assigned a specific function, but working jointly with the other team members and in close association with the other specialty teams.
ADMINISTRATION AND SERVICE TEAMS

Administrative Assistant
Nursing Supervisor
Medical Records
Secretaries
Clinical Social Worker
Lab Personnel (clinical, x-ray and ECG)
Pharmacy Personnel
Volunteers

CORE TEAMS

Primary Physician
Head Nurse
Staff Nurse
Social Worker
Patient Advocate

CONSULTANT TEAMS

OB/GYN
Pediatric
Dental
Audio-Visual
Mental Health
Home Care Nursing
Rehabilitation
Hospital Based Community Medicine Team
Residents Team

COMMUNITY TEAMS

Nutrition
Health Education
Environmental Health
Administration and Service Teams. These teams will provide the services for administration of the Neighborhood Health Center. They will coordinate and supervise all nursing functions, organize and keep medical record system, and provide secretarial services. The lab personnel will be responsible for providing services as ordered by the physicians of the Core and Consultant Teams. The pharmacy personnel will dispense drugs and record their utilization. A volunteer team will be recruited to visit patients, monitor a day care center and help in educational programs.

Core Teams. The core team will be headed by a primary or managing physician who will function, insofar as possible, as a family doctor. He will assume primary responsibility for the patient through the treatment process, including evaluation, treatment and referral. The head nurse will act as physician assistant, take detailed case histories, and will function as team coordinator for implementing the treatment plan. The staff nurse will assist the head nurse. The social worker will assist the patient and family in social problems, evaluation of patient resources and make referrals to community agencies. The patient advocate will be a member of the community, trained by the staff to work in areas of home follow-through, arranging for transportation and child care, assist family in carrying out health management plan, and encourage patients to become active in the community health program.

Consultant Teams. These teams will augment the scope of service program provided by the Core Teams. They will provide specialized consultation and treatment when
required. Some of these teams would not be required on a full-time basis and could operate in different centers on a time-schedule basis.

<table>
<thead>
<tr>
<th>Team</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OB/GYN</td>
<td>Responsible for family planning, prenatal and postnatal care.</td>
</tr>
<tr>
<td>Pediatric</td>
<td>Handling of difficult pediatric cases.</td>
</tr>
<tr>
<td>Dental</td>
<td>Full time provision of dental treatment and supervise a program of oral health.</td>
</tr>
<tr>
<td>Audio-Visual</td>
<td>Treatment of hearing and visual difficulties; coordination of appliance acquisition.</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Function as an outreach post of the Mental Health and Retardation Program.</td>
</tr>
<tr>
<td>Home Care Nursing</td>
<td>Coordination of existing agencies, including the Public Health Nursing Division and Visiting Nurses Association.</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>Physical and occupational therapy; coordination with vocational counselor.</td>
</tr>
<tr>
<td>Hospital Based Community Medicine Team</td>
<td>Team of physician and social worker to make rounds at District Hospitals on patients referred by the Neighborhood Health Center.</td>
</tr>
<tr>
<td>Residents Team</td>
<td>Trainees at the Neighborhood Health Center including Residents, Interns, Medical Students and students of allied health professions.</td>
</tr>
</tbody>
</table>
Community Teams. These teams will work in the neighborhood to provide information on Nutrition, Health Education and Environmental Health.

**Nutrition**

Program planning and consultation; development of policies, procedures, standards, educational material, reports and records related to nutrition.

**Health Education**

Development of educational programs and materials; education and training of personnel; help develop community organizations; evaluation of programs.

**Environmental Health**

Coordination of environmental health program with City Health Department.

**Program of Spaces**

The program of spaces is based on a maximum population of 25,000 or approximately 8,000 families. To arrive at the type of spaces needed, consideration was made of the services to be provided, the staffing requirements, and the number of patients to be seen daily. Based on the maximum population of 25,000, it is assumed that approximately 450 patients will be seen daily. Accompanying these 450 patients will be an additional 250 persons, composed of parents, friends and neighbors. Accommodation for these people will be needed in terms of additional waiting space, toilet facilities and circulation. The distribution of patients, based on 450 daily can be shown diagrammatically. (Figure 12) This distribution is approximate in terms of daily activity and is predicated on similar conditions experienced in outpatient clinics. The ten patients to Administration are those checking on records,
Note: Some patients require a duplication of technical services.

Figure 12.

DAILY PATIENT DISTRIBUTION
seeking information or checking with administration. Of the 360 patients seeking medical attention, 250 of these would be assigned to the Core Teams and 110 to Specialists. All would have contact with Administration through Control, Medical Records and Accounting; some would be sent to other areas for lab-work (70), x-rays (10), prescriptions (300) and special patient services (50). The patients sent directly to the Technical section would be for additional lab-work (10), x-rays (5), prescription refills (25). Some patients would be referred directly to Patient Services (40) for social service consultation, nutrition, health education or environmental health problems.

The program of spaces is divided into five main categories; Administration, Medical, Technical, Patient Services, and Support Facilities.

1. Administration

A. Office Area

Project Director's Office
Physician-in-Chief's Office
Administrative Assistant's Office
Secretarial Spaces (4)
Conference Room (for 20 people)
Toilet Rooms (Staff)

B. Control

Central Patient-Control Area
Switchboard and Communication Center
Main Receiving and Waiting
Appointment Office
Toilet Rooms (public)
Telephone Booths (2)
C. **Records**
   - History and Screening Offices (3)
   - Eligibility Interviewer's Office
   - Medical Records Office
   - Medical Records Storage Area (25,000 plus 15 percent turnover)

D. **Accounting**
   - Accountant's Office
   - Cashier's Window
   - Clerk's Office Spaces (4)
   - Storage (business records)

E. **Evaluation**
   - Psychologist's Office
   - Secretary's Office
   - Clerk's Office Space (2)

2. **Medical**

A. **Acute Care**
   - Emergency Entrance
   - Waiting Area
   - Office-Control Desk (sub-records)
   - Emergency Room (operating)
   - Observation Room
   - Supply Room
   - Toilet Rooms (public)
   - Stretcher and Wheelchair Alcove
   - Telephone Booth

B. **Chronic Illness**
   - Sub-waiting Area
   - Nurses' Station and Office
   - Examination and Treatment Rooms (8)
   - Consultation Rooms (4) (also Physicians' Office)
   - Toilet Rooms (public)

C. **Preventive Care**
   - Sub-waiting Area
   - Nurses' Station and Office
   - Immunization Room
   - Examination and Treatment Rooms (4)
   - Consultation Rooms (2) (also Physicians' Office)
   - Toilet Rooms (public)
D. Specialists' Care

(1) OB/GYN
- Sub-waiting Area
- Examination and Treatment Rooms (2)
- Consultation Room (also Specialist's Office)
- Toilet Room (female)

(2) Pediatrics
- Sub-waiting - Playroom
- Examination and Treatment Rooms (4)
- Consultation Room (also Specialist's Office)
- Toilet Rooms (children)

(3) Dental
- Sub-waiting Area
- Dentist Office Space (2)
- Hygienist and Assistants' Offices
- Operatory Rooms (4)
- Dental Lab
- Storage and Supply Room
- Toilet Rooms (Staff and Public)

(4) Audio-Visual
- Dark Eye Room
- Examination and Treatment Room

(5) Mental Health
- Sub-waiting Area
- Psychiatrist's Office and Consultation Room
- Psychologist's Office and Consultation Room
- Psychiatric Social Worker's Office
- Child Psychologist's Office and Consultation Room
- Clinical Psychologist's Office and Consultation Room

(6) Home Care Nursing
- Nursing Supervisor's Office
- Staff Nurses' Office (space for 2)

(7) Rehabilitation
- Sub-waiting Area
- Physiatrist's Office and Consultation Room
Physical Therapy
Therapist's Office
Examination Room
Change Rooms (2)
Therapy Booths (3)
Hydrotherapy Area
Exercise Room
Toilet Rooms (public)
Wheelchair Alcove
Linen Storage
Equipment Storage

Occupational Therapy
Therapist's Office
Activity Room
Minor Equipment Room

3. Technical

A. Laboratory

Sub-waiting Area
Pathologist's Office
Cytology Screening Technologist's Office
Medical Technologist's Office
ECG Room
Hematology-Bacteriology Lab
Venipuncture Cubicle
Urinalysis Lab
   Specimen Toilet
Sterilizing Room
Supply and Storage Room

B. Radiology

Sub-waiting Area
Radiologist's Office (and viewing room)
Radiographic Rooms (2)
Control Enclosures
Light Lock, Dark Room
Dressing Booths (4)
Toilet Rooms (adjacent to radiographic room)
Film Storage Room
Chemical Storage Room
C. Paramedical

Pharmacist's Office
Pharmacy
Waiting Space
Dispensing Counter
Storage Area
Active Storage Vault

4. Patient Services

A. Social Service - Life Adjustment Services

Director of Social Service Office
Social Workers' Offices and Consultation (2)
Social Work Assistants' Offices and Consultation (8)

B. Nutrition

Public Health Nutritionist's Office
Teaching Dietitian's Office
Nutrition Work Area
   Kitchen (equipped)
   Classroom (for 20 people)
   Storage Room

C. Health Education

Director of Health Education Office
Health Education Assistant's Office
Health Education Aides Work Area
   Classroom (for 60 people)
   Duplicating Room
   Storage Room
   Secretarial Space

D. Environmental Health

Sanitarian Supervisor's Office
Sanitarian Inspector's Office
5. Support Facilities

A. Receiving and Storage
B. Housekeeping
C. Maintenance
D. Mechanical Room
E. Employee Facilities
F. Parking

The Program of Spaces lists the areas required under each category of service. The spaces will interact with each other in different ways depending on the policies developed for the organization of departments, the relation of the ancillary services to the departments, the centralization or decentralization of offices, supply and storage, and so on. The site characteristics will also affect the location of key elements like the main entrance, emergency entrance, shipping and receiving and service entrance. The example is not projected for the purpose of actually designing a facility, but to show the organization required for just one facility serving the needs of 8,000 families. It is intended to provide a frame of reference for understanding the organizational concepts that follow.

NEEDED: A RADICAL RE-ORGANIZATION OF MEDICAL SERVICES

A necessary and obvious extension of the present health care system is the reorganization of services to provide care to the people who need it, where they need it, and in a continuing and comprehensive manner. By making available comprehensive family-oriented care within a designated area, all aspects of health care including preventive, diagnostic, consultive, and therapeutic services could be rendered efficiently and effectively. Most care of this type could be delivered on an
out-patient, ambulatory basis. This is the concept of the Neighborhood Health Center — a place for primary contact, for an entry point into the health care system, and with the potential for referral to other segments of the system with one idea in mind — comprehensive care. And, the integration of such a facility into a neighborhood could serve as the impetus for the attack of other problems plaguing our urban system, those of an environmental, psychological and socio-economic nature.

But the mere institution of such facilities is not enough. The re-organization of medical services must include the tying-in of facilities to a total system — to begin to solve some of the problems of fragmentation, the lack of communication and inequities in financing. The neighborhood health center can be the key, but comprehensiveness of care must be thought of in terms of total organizational concepts — concepts including a broad approach to planning and action, fitted to each particular situation, yet contiguous with an overall plan.
Chapter 3. CONCEPTS OF ORGANIZATION

Comprehensive Neighborhood Health Planning
Changes Required in the Organization of Health Services
Information System for Health Service Planning
The Physician's Changing Role
Organization of Care Areas
Distribution of Health Services
Process of Implementation
Chapter 3.

CONCEPTS OF ORGANIZATION

If comprehensive care is to be the objective in providing health services to the poor, then the institution of single and isolated facilities is not adequate. New concepts of organization must be projected that include the neighborhood facility as a segment of a total system.

COMPREHENSIVE NEIGHBORHOOD HEALTH PLANNING

Diagnosis of the state of health of a neighborhood or 'community of care' is as important as the painstaking diagnosis of the state of health of an individual. Just as the need exists for certain specialized services in the diagnosis of individual patients, so also there exists specialized services for neighborhood diagnosis. The diagnosis and planning of health care for a neighborhood is not limited to the entire neighborhood but can provide an opportunity for study of disease and medical care in relation to family units as well. This could provide the opportunity for utilizing population 'sample' studies for the comprehensive evaluation of communities.

Neighborhood health planning can offer a wider scope of service in the understanding of the determinants of good health, the causes of disease and health service needs, and more important, a method by which feedback on the effectiveness
of care can be monitored and evaluated.

A theoretical or conceptual framework is necessary from which a planning model can be constructed to plan for, and test the effectiveness of, the health care system. The state of health of a neighborhood or 'community of care' at any particular point in time is the product of many interacting processes. These processes are divided into three major categories: 1.) Factors which are part of the present life and health situation of the neighborhood, 2.) Factors relative to the past life experiences of the individuals of the neighborhood, and 3.) Factors of the neighborhood processes relative to health.

I. The Present Life Situation and Health Status of the Neighborhood

Consideration must be given to the interaction between the elements or factors of health within a neighborhood. These elements should include:

A. The state of health of the neighborhood.
B. The nature of the neighborhood itself, its structure and behavior.
C. The environment and people - resources of the neighborhood.
D. The system of health service in the neighborhood.

A. The state of health of the neighborhood. The state of health of a neighborhood may be measured by a number of indices relating to disease as well as to biomedical and psycho-social attributes. Specific indices are used for prevalence rates and mortality rates of disease. This system, though widely used, is biased by the selective factor of attendance for medical care.
Biomedical variables include a number of measurements of direct relevance to health, including standardized methods for height, weight, skin fold thickness and other anthropometric means which allow analysis of physique as well as measurements of growth rates. It might also include the application of standardized tests and measurements such as biochemical and hematologic screenings and genetic markers. These are basic tools used in community health research; and though helpful, are still biased.

Psycho-social elements include the application of sets of standardized tests including personality inventories, intelligence tests and measurement of behavior types. These tests can be helpful, if used with cross-cultured application.

B. The nature of the neighborhood itself, its structure and behavior. The characteristics of a neighborhood which have health application may be viewed as the interacting system of its biological, social and cultural qualities. Planning, in this respect, must be cognizant of the various group types, their customary practices and their cultural background. Groups might be divided into two types, one in which individuals concerned relate to one another and the second, those of a categorical nature in which individuals do not necessarily relate to one another. The first group would include the family, informal friendship groups and other primary groups. The second would include categorical groups defined by biological and social characteristics, such as sex, age, occupation, education, and ethnic groups. The cultural qualities involve behavior of
direct health relevance including basic values and attitudes, as well as
the framework of knowledge and belief system of the groups.

C. **The environment and the people-resources of the neighborhood.** The
physical and biological environment of a neighborhood may also be viewed
as an interacting system including the natural environment and the man-
made environment. Technology constantly influences a change in environ-
ment as well as the material resources. It is not merely the effect on an
area due to some consideration such as atmospheric pollution, but even
more the change which technological advances have brought about in
peoples' daily habits. This means an understanding, in terms of these
advances, of the change effected in the macro-environment and in the
more intimate micro-environment as well.

D. **The system of health service in the neighborhood.** This, in relation to the
three elements just discussed, is the most important study area. There is
an urgent need for a.) research into methods of assessing the direct impact
which health service has on the members of the neighborhood; b.) research
into interaction between the health services and system and other aspects
of neighborhood structure and function. The extent to which the neighbor-
hood feels itself responsible for its health may be reflected in its participa-
tion in various health services, health education, and community organiza-
tion, and c.) attention to the impact of health services on the environ-
mental health of the neighborhood.
2. Past Life Experiences of the Individuals of the Neighborhood

The preceding framework for the study of the health status of the neighborhood was directed toward the present life situation. It focuses on areas of associations, those that seem meaningful to an understanding of health needs. Yet no two individuals, let alone groups of individuals, are exactly alike, either in their genetic makeup or their previous life experience. And, it cannot be expected that their reaction to their life situation will be the same. But there are ways in which people or groups may resemble one another. For instance, a neighborhood with relatively homogeneous practices and common culture, will tend to raise their children in a similar fashion. Even if there are individual differences, a pattern of health of a relatively homogeneous neighborhood will distinguish it from another neighborhood with different structure and different past experience.

Past life experience has two basic elements, the genetic constitution of individuals and the internalization of their life experience. Each individual inherits a constitution and begins a process of interaction with his environment. The prenatal experience is wholly biological. The main processes of internalization are nutritional and biochemical, but also include other elements of importance, such as transmission of maternal immunity. Following birth, the experience widens from a purely biological interaction to that of social interaction and to exposure to the physical environment. The process then of the internalization of these interactions continues through the individual's life, determining
each individual's constitution. The state of health of any one individual at any one point in time is a combination of his genetic qualities, his past experiences which he has internalized, and his present life situation. This could even be extended to include his future, if his present state of health influences his perspective of the future.

3. The Neighborhood Processes Relative to Health

There are processes within any area that affect individuals directly and indirectly. This may involve exposure to specific factors promotive or detrimental to health. The processes might be divided into three categories for clarity, A. transmission, B. social interaction, and C. change.

A. The process of transmission is important in relation to health planning because of the need to understand genetic transmission and the selective process.

B. The process of social interaction involves an understanding of expected and actual behavior (especially reciprocal role behavior) and the network of relationships within a neighborhood.

C. Change might effect the entire neighborhood or segments of it. The change might be in the form of environmental, technological or economic change, such as pollution control, development of better housing and transportation systems, or of introduction of a new employment base. Change might be in the form of social and cultural change, as a change in value systems or change in the
Figure 13.

NEIGHBORHOOD HEALTH PLANNING MODEL
framework of knowledge. And the change may be biological, as in the change of fertility and death rates or a change in the patterns of disease and its control. Change may also occur in the life experience of individuals, as associated with phases of growth and maturity, or in stress experience and deprivation, or in social mobility or the absence of it.

It is evident that health planning on any scale is a complex process. The mere adding-on of units to help a crisis situation is not sufficient or efficient in our present society. If comprehensive care is an objective in health services, then the proper planning of health need, health delivery and health evaluation is essential. The framework outlined above includes many of the parameters involved in the planning process. And that process is conceptual from the standpoint of application to many neighborhoods and many areas. (Figure 13.)

CHANGES REQUIRED IN THE ORGANIZATION OF SERVICES

To improve medical service to lower-income people, basic changes must be made in the organization of service. Listed below is an outline of these basic changes and following the outline is a more detailed description of the changes.

1. Provide a means of introducing the lower-income patient into the medical care system.
   a. By informing lower-income people about health care.
   b. By motivating them to seek that care.
c. By providing easy and adequate access to health care.

2. Improve the psychological acceptance of the patient in the medical setting.
   a. Provide basic orientation to facilities and procedures.
   b. Adjust services in accordance with the life-style of the lower-income patient.
   c. Decrease class distinction and professional bias against the lower-income patient.

3. Improve the means of communication between the professional and the patient.
   a. Provide sub-professional social workers to assist in taking medical histories and defining complaints.
   b. Provide for translating these histories and complaints from common to professional terms.
   c. Provide sub-professional workers to interpret prescribed regimens to the lower-income patient.

4. Determine a method of follow-up on the patient after the visit.
   a. Provide sub-professional patient advocates to check on the patient's improvement.
   b. Provide patient advocates to check on the patient's environment to insure against this contributing to his health problem.
   c. Provide patient advocates to check on prescribed regimens - to be sure they are being followed.
5. **Encourage** patient's willingness to seek **preventive** care before his health problem becomes acute.
   a. Provide education about preventive care.
   b. Develop a system that satisfies the patient's needs.
   c. Provide facilities in a location that are easily and readily accessible.

6. **Decrease** the need for **multiple revisits** for any one problem.
   a. Prescribing medications for longer-term regimens in time-date packaging.
   b. Using long-acting drugs and shots to prevent the patient from having to return often.
   c. Using the patient advocate to assist in home-care regimens.

**Description of Changes**

1. **Introduce into system** - To provide an entrance means into the medical care system, it is necessary to inform lower-income people about health care, motivate them to seek that care, and provide easy and adequate access to health care.
   a. **Inform** - Institution of a program of health education. This might be accomplished through the formation of community health associations, a program of health education in the schools, by disease detection programs, and general information about health and environmental problems.
   b. **Motivate** - This can also be accomplished to some extent through a community health association, through educational programs,
and more effectively by a system of patient advocates who as members of a particular neighborhood could encourage participation in health care programs and facilities by personal contact.

c. Provide - One of the major problems involved in the provision of comprehensive care to lower-income people is the institution of identifiable or recognizable access points to health care. Although there is a reluctance on the part of health professionals to decentralize facilities and staff, it is a necessary step toward providing complete health care. Lower-income people are not so much overwhelmed by smaller facilities, and more importantly, they feel that facilities in close proximity are there for their particular use. And it follows that an improved communication and transportation system is necessary for this concept of decentralization, both for access within the neighborhood and transfer to support facilities. Consideration should also be given to operating the facilities after working hours.

2. Psychological acceptance - There should be a means of providing basic orientation to health care and facilities, for adjusting service in accordance with the life-styles of the patients, and training imparted to professionals in an attempt to lessen the biases against lower-income patients.

a. Orientation - Social service agents are needed to help lower income patients understand the institutional structure of health care;
to help reassure patients and aid their 'psychological care'.

This system might be augmented by sub-professionals who would be able to speak to and for patients.

b. Adjusting Services - It is not necessary to acquiesce to the lower-income patients' whims when considering an adjustment in accordance with life-styles. However, facilities, and particularly waiting areas, could be more effectively designed and furnished so as not to seem forbidding - as in most clinics with benches lined up like a bus station waiting room.

c. Lessen Biases - This implies a long range program of changing the attitudes of health personnel to decrease their class and professional bias against the poor. The community medicine departments of medical schools are beginning to work on this problem with training and teaching programs that have greater contact with the receptors of care. Social science as an integrated program needs to be built systematically into medical education.

3. Improve Communication - The communication between health professional and the lower income patient is seldom adequate. Lower income patients tend to give poor descriptive histories, define their complaints in non-medical terms and have difficulty following regimens.

a. Histories - A system of medical records designed for the lower-income patient could greatly improve communication after initial entry into the system. A type of metal identification tag
could be provided to the patient that would serve as his 'credit card' to the center and other support facilities. This tag could contain certain basic information (like name, blood type) in miniaturized form and would serve as the 'key' to the central health information exchange. This would allow for immediate retrieval of the patient's record by computer printout and a means of entering the patient's new visit and treatment record.

b. Translate Complaints - Sub-professional social workers and patient advocates could assist in translating complaints to health professionals. Being of similar background would aid the communication.

c. Interpret Regimens - Almost all patients visiting a facility for some illness will receive a regimen to follow. Many regimens, like 'take two after each meal' are unrealistic to the life-styles of lower-income patients. And professionals assume an understanding of directions when there are no questions. In this area, sub-professionals could ascertain the understanding of directions. The communication between various lower-income groups could certainly be improved by speaking to them in their own terms rather than in professional terms.

4. Follow-up on Patient - One of the necessary steps in patient care is follow-up. For the lower-income patient this is particularly important for he may return to an environment or condition that causes re-infection, or he may feel better and
discontinue his regimen.

a. **Improvement** - Many patients take illness and disability for granted. A small improvement might well be considered as the outcome of the patient's visit. A patient advocate should make follow-up house calls to ascertain the successful control of the illness or disability.

b. **Environment** - The establishment of a surveillance system in the neighborhood is necessary for improvement of the environment. Again, this might be effected by sub-professionals working in close cooperation with the City Health Department. And in the home itself, checks must be made to insure against re-infection from another member of the family, adequate diet and nutritional consultation, possibly in conjunction with the health education program.

c. **Check on Regimens** - The patient advocate type of person could be well utilized here for checking on prescribed regimens, both for the regimens being followed and for their effectiveness. Perhaps specifically assigned personnel with ready access to the health records could answer questions about regimens by telephone or by follow-up procedures in the health facility. This type of feedback is necessary if evaluation of effectiveness is to be realized.
5. **Encourage Preventive Care** - The re-orientation of the lower-income patient is necessary if he is going to follow some care-seeking procedures before reaching a point of crisis. The subsequent visiting of facilities will be increased by education, satisfaction with care received, and easy access to a system of care that meets his needs.

a. **Education** - As stated before this is an important step toward providing care to lower-income patients from the standpoint of him understanding the elements of care, detection and prevention of illness as well as the understanding of seeking early care.

b. **Satisfaction** - A system geared to helping the patient, which might be on an appointment basis rather than a clinical, wait-your-turn basis might do much for keeping the lower-income patient close to medical care.

c. **Easy Access** - The introduction of a neighborhood center which offers comprehensive care, and alleviating the need for the patient to travel all over the city to different agencies for different services would provide the patient with confidence in a system that meets his specific needs.

6. **Decrease Multiple Revisits** - There are many new innovations that can help the lower-income patient, including devices and drugs that require less judgment and motivation on the part of the patient.

a. **Devices** - Devices, like the packaging of pills in time marked devices to eliminate the confusion of when and 'did I take the prescribed
regimen?'

b. **Drugs** - The use of long-working drugs are starting to be used, which also lessens the need for repeated actions, good timing and persistence. The continued development of such concepts can be particularly focused on the lower-income patient.

c. **Home Care** - Many regimens for illness and particularly for disability can be done in the home. The assistance of the sub-professional patient-advocate would help decrease the need of the patient returning for multiple treatments and also save valuable physician time.

Many of these problems are now being attacked, but for the most part on a fragmented basis. The introduction of total health planning and a system of comprehensive care is the only way of assuring the extension of adequate medical care to the lower-income segment of the population.

**INFORMATION SYSTEM FOR HEALTH SERVICES**

The planning of health services for a neighborhood or 'community of care' can only be effective if pertinent data is available at the needed time and place for consideration and decision. The expanding mass and complexity of data required for such decisions can hardly be handled by any individual or group when the complexity of health care and all the related services, facilities and personnel needs are to be considered. The dilemma of planning without sufficient information can be solved in part by a computerized information system. The computer is a new tool in the
planning process and can offer powerful new capabilities. It can store, together with its peripheral equipment, large quantities of information. It can perform multiple computations at high speeds. (These computations are always quantitative, but they may be logical as well as arithmetical.) As a consequence of these two capabilities, the computer might be said to have the capability of following through long chains of reasoning which involve bringing together at appropriate points large amounts of information and the manipulating of this information through extended sequences of arithmetical calculations and logical comparisons. (20) Even with this capability, the computer is still dependent on human direction. The data stored will only be as good as the information inserted, and the retrieval of the data only as good as the program for locating the best combinations. Despite its capacity and speed, large combinatorial problems and search procedures can take a long time. Even though it can store vast quantities of information, the system for retrieval must be so organized as to pull out the relevant, useable information. The computer can compute the effects of many combinations of events, but it cannot intuitively locate the best, or even good, combinations.

The need for improved and accessible data has inevitably led to an information system for health facilities planning. One example of such a system has been developed by the California Health Information for Planning Service or CHIPS. The CHIPS system was initiated for the purpose of:

1. Identifying data which is needed by various user organizations (health facilities, professional organizations, planning groups, etc.) for planning and related functions.
2. Select the best sources for providing the data.

3. Test methods of collection, storage, and retrieval of the data.

4. And evaluate the system in relation to services provided.

The CHIPS concept recognizes that each user generates data which may be of interest to other users of the system, and significant data may be generated also by nonusers. In this type of system, it is possible to take advantage of all data available.

To design and demonstrate such a system, it is necessary to define the problems and agree on a standard nomenclature. Information linkages need to be designed into the system, so that data entered can be reassembled in various ways to serve many different purposes. As an example, data on patient utilization of facilities might include the resident census tract of each patient, thus allowing the data to be related to other information, such as, population, housing, access, and travel time to facilities. (Figure 14.)

The diagram for the Health Information Exchange indicates a collection, storage and retrieval system for health information. One problem that now exists stems from a lack of coordination among the various agencies dealing with health problems. Collected data is often done on an agency by agency basis and the information is not available or even known about by other agencies. The availability of a central exchange would also encourage individual inputs into the system. This input could be used to test the data entered by mass collection, and would also offer the potential of developing highly specialized areas of information.
Figure 14.

HEALTH INFORMATION EXCHANGE
The health information exchange could also mean a decrease in the frequent and burdensome data demands now made on health facilities—demands, for instance, for reports that are similar, yet different and time consuming. Participating facilities and agencies could, as a by-product of their own internal operations, produce periodic reports on services, manpower and costs. These could be summarized by the exchange and made available to other qualified users.

The concept of multiple users could promote several essential goals:

1. Provide for collecting data pertinent to planning as a by-product of routine operations.
2. Updating data by normal user operations, providing one reliable source for many organizations.
3. Improve data-collection procedures by sharing experiences among the users.
4. Develop standards for controlling access to general information.
5. Coordination with a region-wide exchange.

One good example that shows the utilization of a central information exchange is 'Multiphasic Screening', a disease detection process. Traditionally, disease detection proceeds through a progressive system of procedures and tests that enable the physician to arrive at a definitive diagnosis. A classic example of such a uniphasic series of tests can be drawn from pulmonary tuberculosis detection; 'presumptively' afflicted persons are identified by mass chest x-ray units. Positive skin tests for tuberculosis delineate some of these persons as 'probably' tuberculous, and obtaining a positive culture for tuberculosis 'definitely' diagnoses the disease. Mass x-ray then
is the screening procedure in this example.

From this 'traditional' approach we are fast approaching a system for progressively sophisticated techniques leading to early detection of disease. Most existing systems, in fact, are still at the unilevel of sophistication. Some procedures and techniques might be automated, but they proceed in an essentially unidirectional manner. Complete and proper use of automation will lead to predictive multiphasic testing. If results of screening tests could be immediate, more definitive testing could be scheduled at that time, thus reducing physician time and patient returns for additional testing.

Traditional examination of body systems (that is, head, eyes, ears, lungs, heart and so on) may well be replaced by an examination sequence tailored to characteristics of patient flow. All of the tests that can be performed in one body position may be grouped together, or all the tests that are measured by the same basic kind of instrument might be combined at one station.

An understanding of the various characteristics of that segment of the population to be tested will determine, to a great extent, the patient flow, choice of tests to be performed, and the level of detection.

In the diagram for the Distribution of a Variable in a Population, the level of detection refers to the ratio of sensitivity to specificity. (Figure 15) If the result of a test or procedure has a bimodal distribution within the population, that is a group of normals and abnormalities who overlap (line C on the chart), the point of
Figure 15.

DISTRIBUTION OF A VARIABLE IN A POPULATION
borderline determination can be arbitrarily altered (toward line A on the chart) so that all the diseased are identified, but a relatively large number of normal persons will also be included. (21)

The consequence of this tactic is to load the validation or follow-up facilities with many normal subjects who require delabeling. However, the necessity of identifying all who may possibly be diseased may be so compelling (because of the nature of the disease) as to make worthwhile the retesting of a proportionally large number of false positives.

The purpose of data collection must be clearly established, then and only then, can automated techniques be applied. And, automation and instrumentation are still but tools. The physical examination by the physician is still necessary for many conditions, but data collection and retrieval can aid in this process by comparison of findings to other segments of the population.

The need for such readily available information is not only evident, but imperative. Since such an exchange could provide for the linking of many sources, and a broader scope of subject matter, important patterns in the occurrence, treatment, and outcome of a wide range of diseases could be monitored.

THE PHYSICIAN'S CHANGING ROLE

Much of the concern about the lack of care in the health-care 'system' is centered around the intractable fact of shortage in health manpower and specifically in the shortage of physicians. Since 1950, the number of physicians has grown about
25 percent faster than the total population, and that margin is expected to increase as medical schools open their doors to more students. But such over-all figures conceal some trends that have important implications for the availability of care.

In recent years many physicians have turned away from patient-care to work in research laboratories, industry, public health, and other institutions, to teach, or to serve as hospital administrators - all functions of great importance to the future. One-third of all physicians now devote themselves to such activities. As a consequence, the number of physicians actually caring for patients declined 10 percent relative to the population between 1950-1965. There is no evidence that this trend toward greater specialization will stop. (22)

The increase in demand for medical service will far outstrip the supply of physicians. The factors that have expanded demand dramatically in the past decade - increasing affluence, new infusion of purchasing power from private and public insurances, more education and consciousness of health, rapid growth in the youngest and oldest segments of the population, and continuing urbanization - will inevitably continue, perhaps even at a faster pace.

Given the fact that the shortage of physicians is going to continue, the medical profession must find ways to improve production. Three possibilities are in the forefront for consideration: 1.) assembling of 'group practices', 2.) use of paramedical professionals who are not physicians, 3.) broad-scale application of computer systems and other new techniques.
Group Practice - This method of practice offers many advantages. The possibility of sharing space, equipment and facilities at a more comprehensive and less expensive rate than in solo practice is one advantage. Relief from non-medical business work like billing, bookkeeping, contacts with detail men for ordering drugs - work that consumes an average of 25 percent of the physician's time could be realized. Access to good health records is another advantage. Most private physicians have incomplete data on any individual patient; records are scattered in other offices and hospitals previously visited. The group practice system also gives the physician immediate access to specialists in other fields. For 'group practice' to be very effective, it must be multispecialty in scope. In this way, the patient will have access to all the necessary aspects of health care. The potential for this arrangement is very evident in the neighborhood health center - where multispecialty group practice can be the means of providing comprehensive care.

Paramedical Professionals - At present, because of the wide gap between physicians' education and that of others in the medical field, the physicians routinely perform many tasks that are beneath their level of competence. In some areas, highly trained professionals have emerged in response to a shortage. One such area is in anesthesiology, where nurses are continuing their education to become Anesthetists, and work either in a team headed by an Anesthesiologist or under the direction of the Surgeon. Some medical schools have initiated programs to train 'physician's assistants', who will be professionals qualified to do many of the routine chores in practice, such as measuring, testing and giving therapy. Many nurses within private practice already do this kind of work. The potential, however, is for intensive
specialty training, and ultimately the development of 'health-care teams', leaving the physician free to work as a team leader and doing only that part of the service that requires the highest skills. Again, the application is evident in the framework of the neighborhood health center, with the possibility of more efficient and more comprehensive handling of many patients without the necessity of a one-to-one ratio of physician to patient.

Application of Computer Systems - Another potential area for increasing the efficiency and productivity of physicians is by the use of technological innovations. The range of computer application can vary from the storing of a patient's records to the banking of data on the entire community. The potential of a diagnostic data bank can allow the physician to check his diagnosis, given the required variables, with those in the bank. And computerized 'multiphasic screening' is already in operation in some locations. This type of system provides a clinical-information profile on the patient for the physician's immediate use and the detail work of various chemical and electronic tests are automated, permitting the testing and operation of the equipment by technicians.

"With few exceptions, physicians are conscientious and dedicated to providing the best possible care for their own patients. But preoccupied with this demanding one-to-one responsibility, and limited by background, and training, most are unwilling to recognize the flaws in the general system, and the unmet health needs of many of their fellow citizens. The flaws, however, are now showing up everywhere - in the waiting rooms, in hospital corridors, and in the figures on the cost of care." (23)

In response to these problems and the need to provide care to the lower-income
segment of the population, medical schools are beginning to make major changes in their curricula and teaching methods. One of the most forward-reaching programs has been developed by the Case Western Reserve Medical School in Cleveland.

"All teaching was made interdepartmental, with subject-oriented committees giving courses grouped around the human body's various systems - respiratory, cardiovascular, neurological, etc. The first year was generally devoted to normality, the second to abnormality. Basic science instruction was closely tied to clinical case exposure. Elective courses were introduced, and students were given two half days a week to develop their own medical interests. They were also required to complete a major independent research project. Most of the fourth year was made elective, permitting students to concentrate more intensely on clinical specialties. Many tests were eliminated, and grading was put on a 'fail-pass-honors' basis." (24)

Other innovations were introduced, including a 'track' system which permitted students with different educational backgrounds to follow separate lines of study. The student was also given 'patient' responsibility at an early point, by being assigned to a family to trace their progression and development in health care. Although not given any medical responsibility, it gave the student a chance to work with real people and real problems.

The most recent emphasis in medical school change is in the development of 'Departments of Community Medicine'. The primary purpose of such departments is to train a type of physician well qualified in 'primary', 'personal' or 'family' care (versus specialization).

The physician would 1.) serve as a person for first contact with the patient and
thereby provide a means for the patient entering into the health care system,  
2.) evaluate the patient's total health needs, providing personal medical care and  
refer the patient when indicated to appropriate sources of care while preserving  
the continuity of his care, 3.) assume responsibility for the patient's comprehensive  
and continuous health care and act as a leader or coordinator of the team that  
provides health services, and 4.) accept responsibility for the patient's total health  
needs within the context of his environment, including the neighborhood or  
'community of care' and the family.

The training of this type of 'Community Medicine' physician would be ideal for the  
neighborhood health center. The center itself could provide the setting for future  
education of similarly oriented physicians. It could provide a place where patients  
first enter the medical system; where preventive medicine could be practiced at the  
optimum; where the physician practices as a primary, family doctor; where the  
physician can learn how to best work with and utilize the skills of a health care  
'team' composed of nurse, social worker, technologist and other aides.

The neighborhood health center could be developed as a teaching resource to  
supplement the basic science courses, and university hospital and clinic facilities.  
And students could learn under supervision, by observation at first, participation  
in activities such as group work by the teams, and finally as intern and resident  
work in community medicine.

And finally, the neighborhood health center could become a laboratory in itself,  
providing a base for studies of 1.) the natural history of disease, 2.) early diagnosis,
3.) the evaluation of the significance of social factors influencing patterns of disease, and 4.) the interaction of clinical and social pathology in the determination of prognosis. (25)

ORGANIZATION OF CARE AREAS

A neighborhood might be said to be a geographic area with certain homogeneous characteristics which demarcate it from adjoining areas or neighborhoods. In the eyes of a sociologist, a neighborhood might be an area of 'homogeneity of economic and social structure'. To a geographer it might be 'an area where physical conditions are similar'. But to someone concerned about health planning, the neighborhood might be defined as a health catchment area, where the needs for care and the access to facilities could be identified.

Identity of Neighborhoods

In reality, the neighborhood is difficult to identify. The delineation of a neighborhood's boundaries depends, to a great extent, on the problem being considered. In the area of health service neighborhoods, the determination might be made on the basis of population density and movement, health service requirements, and transportation and communication systems. The relationship to other support facilities, lines of patient referral, and accessibility points might also be considered. (26)

The main concern should not be just the development of specified areas, but also the interconnections and flows between health facilities within the areas, and to support facilities out of the area. The definition, then, of areas or neighborhoods
implies the imposition of an organized scheme or structure of flows and linkages. This organizational concept can offer a new method of approach: that of creating new types of linkages between facilities rather than merely identifying existing or non-existing linkages.

Political considerations often raise problems not specific to health planning, but crucial to the setting for health action. The most significant political issue in health care re-organization is that of the revision of outmoded, overlapping, and ambiguous jurisdictions. Health service-administrative areas must be efficiently functional in terms of major health problems. Some of these problems can and should be handled within the area of the political community, but not all health problems can be circumscribed by traditional community boundaries. (e. census tracts)

The planning, organization and delivery of comprehensive health services must be based on the concept of a 'community of solution', that is, environmental health-problem areas, rather than primarily on political jurisdictions. (27)

Development into Structure

The definition of neighborhoods for the express purpose of providing comprehensive care health centers is an initial step only in the concept of providing services. The linking of these centers to each other and to adjunct facilities is the underlying basis for determination of these areas. To provide the full range of services necessary for comprehensive care, we can begin to develop these linkages to medical
education facilities, the general hospital, specialized clinics, and a data collection center.

The structure of the system depends not so much on which facilities are linked with one another, but with the activities performed at each facility and the nature of the linkages and flows between the facilities. The nature of the linkages and flows will be determined by the type or function of services required for each neighborhood.

Functions of Service

The necessity for this linking of facilities can be shown by defining the functions of service.

1. Referral of patients from the neighborhood to specialized facilities.
2. The back-and-forth flow of patient records.
3. Consultation by specialists from centralized facilities to the neighborhood centers.
4. Continuing support and education from centralized facilities.

"In general, these functions have been described as the 'two-way flow' of patients centripetally and of skilled personnel and information centrifugally." (28)

The linkage functions are needed for the express purpose of bringing about a more equitable distribution of comprehensive health care, rather than just efficiency in organization.
Decentralization and Centralization

Decentralization and centralization have two uses which must be separated: structure, which has been shown as the relationship of distribution of services by linking, and administration, which refers to the way decisions are made that concern the services. To provide a comprehensive range of services at the neighborhood level, decentralization is indicated. But the organization and administration of services requires centralization as does the requirement for providing specialized facilities. The structure of a system requires a compromise: decentralization of primary care and centralization of specialty care and organization. The centralization of administrative functions does not destroy the autonomy of the neighborhood center in its day to day operation, but provides a means for central planning and policy making that is imperative in the development of comprehensive care in a comprehensive system.

DISTRIBUTION OF HEALTH SERVICES

The distribution of health services depends on the organization of the health care system itself. In order to understand the idea of distribution, it might be well to define the methods available and a description of each. The main methods in present use are categorized as follows: 1.) Utilization, 2.) System performance, 3.) System structure, 4.) Morbidity and mortality, 5.) Distribution, and 6.) Distance.
1. Utilization

The concept of distribution based on utilization takes into account the present use of health resources and translates this into a reliable indicator of the future. This may be based on demand, comparison or an analysis of demand.

a. **Demand** - a method that extrapolates the present ratio of health resources to population and projects this demand by a projection of the future population. This method takes into account only increased demand due to demographic growth. Obviously the method is subject to criticism because it not only maintains the status quo but it also magnifies the size of its defects. And, shifts in demand related to socio-economic changes in the population and development of new scientific and technological advancements cannot be considered. (29)

b. **Comparison** - The comparison method takes the ratios of resources to population from an area where health care is considered adequate and applies these ratios to another population group. This method suffers the same defects as the demand method; few areas are truly comparable, and even fewer have the same needs. (30)

c. **Analysis** - A more sophisticated approach than simple extrapolation to the future is a system based on analysis of present demand. This method uses market analysis of consumer use. It takes into account many variables and translates this to a 'consumption unit' which is applied to different age groups. This method provides some basis for estimating future consumption and is more reliable than simple demand or comparison based on
2. **System Performance** - The concept of distribution based on system performance assumes that certain required resources are determined by the amount and type needed to achieve a defined output, measured in terms of performance such as reduction in disease, disability, mortality, and so on. Effectiveness is judged by the relationship of input and output in the system. However, this effectiveness is based on objective measurement, such as the opinion of experts, for little is known about the true effectiveness of systems. Most analytic studies have been concerned with productivity, expressed in terms of efficiency, but not effectiveness. (32)

3. **System Structure** - This system of distribution determination is based on mathematical models and allows for greater clarity and precision than intuitive, utilization or performance-type systems. The systems approach demands a thorough understanding of both the internal and external relationships of health distribution, and because of its predictive potential, can calculate change by simulated situations. In prediction and simulation, the required resources are obtained by comparing the projected utilization of health services with the probability of change. Thus, a goal might be to find the best method of minimizing the change or cost of medical services to be provided to a certain segment of the population at a certain time. (33)

4. **Morbidity and Mortality** - Morbidity, or the incidence of disease, has been used as a determinant for health services utilization. The limitations on the
use of such data, however, are subject to estimating services on a highly subjective concept of need rather than an objective one of demand. The existence of need does not necessarily imply an expression of demand. And too, accurate and adequate morbidity data is not readily available, primarily because the gathering and updating of such data is expensive, time-consuming and of low priority in our present system. (34) Mortality statistics are more reliable and are available annually. The problem with using this as an indicator is that there is a constant ratio change of health resources utilization, (such as technological, socio-economic), thereby making validity of older mortality data questionable. (35)

5. **Distribution as a System** - The concept of distribution is the geographic and functional relationship between resources and the population served. There are two basic approaches to this concept, one being 'facility-centered' and the other 'population-centered'.

   a. **Facility-centered** - This method is based on the survey of a facility to determine the population served. It requires the gathering of data concerning patients' residence, the distance from the facility and the use of the facility. It is used primarily to predict future use and future requirements by survey method. It does not, however, consider the influences of choice and selection, or lack of use by certain segments of the population.

   b. **Population-centered** - This is a method using a defined population area to analyze current patterns of use. It has the advantage of giving the
102

image or idea of community concern but does not in itself provide a basis for evaluating and locating facilities. (36)

6. **Distance** - The concept of distance as a factor in the accessibility and utilization of health care can be used as a method for determining 'medical service areas'. It can be stated that 'the distance people travel for health care is related inversely to the use they make of such care'. And people most removed from care facilities tend to limit visits to curative rather than preventive visits. (37)

A knowledge of the pattern of movement for medical care is a prerequisite to the delineation of medical service areas. But the measure of physical distance alone ignores the human attributes of travel. Human involvement in terms of effort, the choice between alternatives, ease of transportation, and access to travel routes are the major factors that determine distance as a factor.

Current methods of market analysis can be applied to 'medical service areas'. They are limited primarily to linear analysis of distance and to some extent a two-dimensional (vector) measure of distance and direction. Mathematical utilization models are in the development stage and there exists the potential for a three-dimensional model of patient and service distribution that will incorporate density, overlap of patient areas and variable demand for health services in different areas. (38)

The socio-economic and locational characteristics of the population must also be included to provide the degree of understanding necessary for 'optimal' distribution of 'medical care services'.
PROCESS OF IMPLEMENTATION

The need for reorganizing the present system of health care to include all segments of the population has been established. The point of crisis has been determined - that of the lower-income segment of the population. A statement has been made for the type of facility that would begin to solve the health needs of lower-income people. Organizational concepts have been enumerated for tying these facilities into a total system of care. The question remains - where do you begin? The management processes required to initiate any program of this scope are complex. An organizational framework is outlined below for the purpose of suggesting a mechanism that might encourage a constructive approach to the implementation and financing of a bold new approach to health care.

Establish Body of Authority

This Authority or Council would be developed on a Metropolitan or Regional scale - for the purposes of being able to plan at this level and exercise the authority necessary to implement the plan.

Define Objectives

The objectives of the Council would be clearly defined. They might include a statement of the overall problem, the definition of responsibility and the projection of solutions through the recommendations of a 'Task Force'.
Initiate Task Force

To explore all of the possibilities of the organization and coordination of health care, a task force composed of experts in different fields would be formed. This 'Task Force' would formulate the recommendations for establishing priorities, and translate the objectives into goals.

Promote Enabling Legislation

The 'Task Force' and the Council would promote the necessary legislation for initiating funds, from tax revenue, bond issues and use of money from the private sector.

Determine the Planning Required

The 'Task Force' and Council would also determine what studies, surveys, research, and evaluations would be required to make comprehensive recommendations for initiating the program.

State Policies

After the initial planning process, policies would be made which would include an elaboration of objectives, the relationship of the program to other agencies and the private sector, the involvement of consumer participation, and to what extent project grants would be sought for solving specific problems needing immediate attention.
Establish Program Requirements

This would include the definition of service areas; the possible locations of facilities; the scope of service to be provided; the personnel requirements and the definition of personnel duties; how services are to be organized and distributed; eligibility determination; type of records to be kept; and, establishing the guides for a central automated data system for collection, storage and retrieval of the information needed to provide program analysis, research, operation and evaluation.

Establish Relationships

This would include the relationships necessary with the medical school for training and recruitment of physicians and for use of the facilities as laboratories; the relationships with hospitals and specialty clinics; the relationship to other programs and agencies; and the relationships to the service area for consumer participation.

Determine Costs of Program

The projection of funds needed in terms of Capital, Operational, and Long-range Financing.

Capital Financing - Cost of space, equipment and start-up costs including planning expenses and consultants' fees.

Operating Budget - Payment of personnel salaries, supplies, maintenance, insurance, and debt service.

Long-range Financing - Funds for continuing planning, research and evaluation programs; projected requirements for extension of services and service areas.
Develop Standards of Accountability and Performance

The Authority would have the responsibility for establishing standards of accountability for the management functions of the system, for checking on the effectiveness and completeness of care and for evaluation of the proposals and solutions being implemented.

There is a growing awareness of the health needs of people — particularly the urban poor. It is not possible to formulate an immediate and perfect solution to the problem. We know enough now to get started and to get started effectively. We must develop a plan, be specific about objectives, and proceed.
Chapter 4. CONCLUSION

Definition of Issues
New Facility Type
New Concepts of Organization
A Modest Proposal
Chapter 4.

CONCLUSION

The complex problems in our urban environment indicate one important fact - that our technology and research capabilities have outdistanced our ability to serve the needs of people. This is particularly true in the health care field, where new and exciting life saving techniques have been developed and directed toward saving the individual, yet the less complicated and mundane methods of treating people's day-to-day medical problems have not been effectively implemented. This is evidenced by the ever-increasing number of people who receive only minimal or fragmented health care because of a system structure that does not reach everyone. Health care in urban areas to the urban poor is at the point of crisis if you consider the effectiveness of health service to that segment of the population.

Definition of Issues

The study of the health problems in urban areas has led to the definition of basic issues relative to the health needs of the urban poor.

- The health care 'system' has never adequately served the needs of the poor because it was not designed to do so.
- The facilities now provided for the poor are not readily accessible to the majority of persons needing health care.
- The programs now available offer only a fragmented approach to serving the
family health needs of the poor.

- Medically disadvantaged groups do not have the ability to initiate programs of health care for themselves. They possess neither the professional capabilities nor the resources to do so.

- To provide health care to the poor, it will be necessary to develop new approaches in the planning for and delivery of health services.

- To improve the relationship between the 'consumers' and providers of health care, a means must be found that allows the 'consumer' to participate in the planning process.

- And, a method must be developed to let the 'consumer' recognize and accept the responsibility for improving his personal and family health situation.

It is evident that the solution to this complex problem demands a new type of approach based on a coordinated planning effort that is interdisciplinary, interagency and interinstitutional in scope.

To think in terms of this being a problem only for the health care providers would be unrealistic - the solution to this urgent need must be a concern of everyone.

The organizational requirement alone would necessitate bringing together many professionals and interested laymen to study and evaluate the health needs and to design a system 'structure' to provide for these needs.

The medical care field offers an obvious advantage in the planning process, because it is probable that no other single area possesses the capability, resource, experience
and expertise to institute such a comprehensive approach to solving one kind of problem. A coordinated planning effort in the area of health service could and would provide the impetus for attack on other environmental problems in our urban areas.

The health planning process could provide for staging of growth, with emphasis on the most immediate needs, and the potential for re-evaluating, adding to and projecting toward established long-range goals.

The definition of these basic issues and the requirement for a coordinated planning effort leads to an obvious conclusion – that a new system 'structure' must be developed that permits new concepts to be implemented in the delivery of health services.

**New Facility Type**

The recognition of immediate results could be obtained by establishing pilot or test facilities. This kind of action-planning would offer a two-fold result – encouragement to those involved in the planning process and hope to those people who would receive the care. But more importantly, it would establish a method of validating plans for long-range programs by providing a means of evaluating decisions during the planning process. The pilot or test facility would be located in a defined service area, accessible to those needing the facility and identifiable as the place for receiving health care. The facility would serve as a place for primary contact, an entry point into the health care 'system'. It would make available comprehensive,
family-oriented care to the people within a designated neighborhood and offer most preventive, diagnostic, consultive and therapeutic health service on an out-patient, ambulatory basis. The potential for early contact and early diagnosis would assist in the referral of patients with more severe and acute health problems to other specialized facilities for more extensive diagnosis and treatment or hospitalization. The necessity of a referral system indicates more than the institution of isolated facilities. To provide comprehensive care, the facilities must be linked together into a total organizational 'structure'. (Figure 16.)

New Concepts of Organization

The linking of the neighborhood facilities to each other and to supportive facilities by communicative and administrative systems is an important step in the planning for effective health care delivery. The linkage system provides for the referral of patients from the neighborhood to specialized facilities, the back and forth flow of patient records, the consultation by specialists from the centralized facilities to the neighborhoods, and a means of both continuing support and the flow of educational services from the centralized facilities. Allowing for these functions that link the health care facilities is necessary, if comprehensive care, efficiency of organization, and an equitable distribution of services is to be realized.

Organizational efficiency should not be the only concern in properly distributing health services. There must be a new 'order of values' directed toward meeting the real health needs of the urban poor. This 'order of values' would include, as a first priority, the changing of the attitudes of the poor through education, to the end of
Figure 16.

DIAGRAMATIC REPRESENTATION OF STRUCTURE
helping them understand the need for self-responsibility toward their own health problems. It would also include changing our own perspectives toward health care and reshaping the attitudes of health professionals to understand the wants, needs and life-styles of those people receiving care. The necessary financial commitment to provide such an expansive and extensive change in the approach to health care service can only come through a change in our value system.

A Modest Proposal

The neighborhood health center might take the form of a renovated building, or of a health street, comprised of existing buildings, modular add-on structures or manufactured mobile units. The neighborhood health center would signify growth, transition, and change. It could provide the impetus for the rehabilitation of the surrounding areas. A sense of community, of civic pride and accomplishment would surely be realized. The neighborhood health center could provide the focus as a place of meeting, gathering and discussion.

The neighborhood health center and the organizational structure would become a 'symbol' of our commitment to solve the pressing problems in our urban environment. Health care would be a tangible activity, a tool for changing ideas from passive rejection to active participation, thus building a responsibility among the residents of the neighborhood toward each other and the community as a whole.
FOOTNOTES


15 Office of Economic Opportunity, "The Comprehensive Neighborhood".

16 The Public Health Service Act as amended, Title III, Section 314 (e).


19 Christian and others, "Community Child Care," p. 68.


24 Faltermayer and others, "It's Time," pp. 81-83.


36 I.S. Falk and others, "The Development of Standards for the Audit and Planning of Medical Care," Medical Care, 6:101, (1968).


SELECTED REFERENCES


Brown, Howard J. "Delivery of Personal Health Services and Medical Services for the Poor, Concessions and Prerogatives," Milbank Memorial Fund Quarterly, 1968.


