THE ROLE OF THE HOSPITAL IN THE COMMUNITY
AND THE FINANCING OF HOSPITAL-BASED MEDICAL CARE

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1Background document for reference use at the Technical Discussions on "The Role of the Hospital in the Community and the Financing of Hospital-Based Medical Care".
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1. INTRODUCTION

The proposed terms of reference for the Technical Discussions in 1973 have been summarized as follows:

"...To consider the role of the hospital in the provision of medical care, inpatient, outpatient and domiciliary; as a teaching, training and research activity; in its relation to public health services;

...To examine the various methods of financing hospital-based medical care;

...To suggest ways and means by which there may be a more effective and efficient functioning of the hospital system in terms of service and of costs."

The above proposal implies essentially two groups of problems to be reviewed and possibly answered during the discussions:

(i) problems of a mainly strategic character regarding the role played by and methods of financing hospital services within the broader context of a community health care system;

(ii) problems of a mainly operational (tactical) character related to efficient functioning of the hospital-based medical care delivery.

It is implicitly assumed that both groups of problems are closely inter-related, though often, for practical convenience, separately discussed. On a broader international scale, both groups of problems have constituted the key subject of conceptual deliberations for at least two decades. However, due to different reasons, a significant gap can still be noticed between the promising concepts which have been agreed upon and advocated in the world forum and their practical implication in particular countries. There seems to be a common feeling that more remains to be done in this field in all parts of the world, including the Western Pacific Region.

The attempted aim of this paper is to give the general introduction to the topics selected for discussion through a brief review of problems considered, of development of concepts and of possible ways of practical solutions. More specific aspects, especially those directly related to the situation in the Western Pacific Region, will be covered by other working papers and the discussions themselves.
2. THE ROLE OF THE HOSPITAL

2.1 Pressures for change

It is increasingly recognized all over the world that medical care, as one of the main components of every national health system, should make available to the individual, and thereby to the whole community, all necessary facilities for the prevention of disease, the restoration of health and alleviation of disability. The extent of medical services still varies from country to country, according to local concepts and conditions, but usually it includes hospital and other types of institutional care, ambulatory care, domiciliary care and medical rehabilitation.

The whole body of medical service organization in any given country is a part of the social and administrative structure of the country concerned, and the main principles which govern national life in general, especially in politics and economy and other forms of human interrelationships, reflect themselves in ways of medical care development. A consequence of this development is an incessant evolution of the structural and functional forms of medical services.

The developmental differences between the health systems in the contemporary world, depending on the political, economic, cultural and social conditions of particular countries, determine the role of the hospital within the system of community health care and still remain a matter of debate. However, apart from existing differences, a general tendency can be noticed to develop a comprehensive health care system for the community, within which the role of the hospital should be seen as an interdependent part of the total health care network.

This tendency seems to be dependent on different motives, acting as pressures for change and causing gradually a deeper involvement of the state government in community health matters, e.g.:

(1) increasing recognition of the basic human right to easily accessible and continuing health care, the maintenance of physical, mental and social well-being of the individual, irrespective of their economic and social status ("humanistic motive");

(2) increasing recognition of the economic value of human health within the broader concept of socioeconomic development ("economic motive");

(3) increasing influence of scientific knowledge, especially of medical and social sciences, on health awareness of policy-making bodies and general public, resulting in a higher health culture and higher health demands ("cultural motive");
(4) rapid progress in medical technology resulting in broader scope and increased effectiveness of medical care, but also in differentiation of medical functions, specialization of medical profession, and in costly medical equipment ("technological motive");

(5) increasing structural and functional complexity of modern medical care delivery, resulting in a higher absorption of social resources and a pressing need for rational planning, coordination and evaluation of medical care services ("organizational motive").

When discussing the role of the hospital in the community and the methods of financing hospital-based medical care, it seems reasonable to keep in mind the above listed pressures for change.

2.2 Development of concepts

The traditional approach to the hospital role could be described as "isolationist". Each hospital was, or tried to be, a "law unto itself", unconcerned with the actions of any other health care agency except insofar as they impinged on what is regarded, often jealously, as its own domain. Hospitals were charged with no authority for providing an overall health care system and accepted only a limited responsibility for whatever part of a system they provided. Their cooperation with other agencies was also limited. By the time of World War II this approach to the hospital role, at least in some areas and countries, had begun to show signs of breaking down as the necessity for concerted action towards the provision of complete health care became clearer. Since that time the movement towards the integration of health care facilities, whether on a compulsory or a voluntary basis, has become much more widespread even though it is yet by no means universal. Increasingly, hospitals are seen as a part, normally the major part, of a total and far-reaching health care system, irrespective of whether the word system is used to describe a cohesive arrangement with a major degree of central control or a more loose arrangement in which relationships are less formal and spring more from local needs and initiatives.

The concept of hospital integration with the total community health care system was formulated theoretically as early as the third decade of this century (e.g. Semashko and Solovyev in the USSR, Dawson in the United Kingdom, Stampar in Yugoslavia). It was then implemented in the socialized health care system in the USSR in the form of an "integrated hospital". Since World War II, a complete (functional and structural) integration, or a functional integration, of the hospital with other health services has been adapted in a number of countries. In countries
with a closer central control of the health system, administrative decisions prescribed and stimulated many of the interagency relationships, achieving the more advanced integration of the hospital with the total community health services. In freer systems, naturally, there has been far less effort devoted to the regulation of relationships between health care agencies. But even in those countries, a strong voluntary movement towards integration of effort between hospitals (e.g. in terms of merged hospitals, shared services for hospitals, hospital regionalization) has been noticed in recent years, often extending to the non-hospital providers of care. The preventive, the curative, the rehabilitative and the educational arms of public health services; the providers of domiciliary, outpatient, and industrial care, have also moved towards integration of their efforts with the hospital services.², ⁴, ⁵, ⁶, ¹⁰, ¹¹, ¹²

In addition to the development of new interagency relationships, the evolution of new relationships between the hospital and the community has emerged. For the most part, hospital services have been paternalistic. The providers of care have tended to offer those services which they think the patient needs, or those services for which they think he is prepared to pay, or those for which he may be able to arrange payment by a third party, all offered in a fashion dictated by the hospital's own convenience. The patient has rarely been asked what services he requires or in what manner they should be provided. This has been understandable, if not perhaps inevitable, in view of the patient's scanty knowledge about medical care. Nonetheless, two challenges have, at least, modified the hospital's standing. On the one hand the educated groups or members of society, whose members are frequently highly trained and skilled in their own professions, have expressed a greater interest in hospital services than hitherto, both in their own and some other countries, in alliance with the third-party payers of hospital care. On the other, the poorer groups or members of society have also increasingly demanded a say in the affairs of social institutions be they hospitals, schools or universities. The long-term effects of these moves are likely to be an increasing responsiveness of hospitals to the communities they serve and some changes in the balance or structure of power that controls them.¹¹/²

The changes which have started and which are still taking place in the external environment in which hospitals work have been accompanied by changes of equal importance within the hospital. The growth of both compulsory and voluntary health insurance, by removing many of the financial barriers to medical, has increased the numbers seeking treatment in hospitals and other agencies. The rapid and extensive developments in medicine and surgery have meant a substantial increase in the types of work that the hospital is able to undertake. The growth in medical knowledge has been accompanied by increasing specialization in both research and treatment, and the rapid growth of whole new professions and sub-professions within the hospitals. The hospital is called on to
to provide more care at a much more intensive level for many more patients. While it is true that some of the developments in medicine have greatly lessened the period of the patient dependency on the hospital, this has tended to result not in an overall decline in work but in a greater throughput of patients. One overall result of greater professional specialization, as the intensity of care increased, has been not only an increase in staff per patient or per bed, but more types of staff, more procedures, more equipment and materials, and a higher cost of services.

The changes in the role of the hospital, in its composition and its relationships with other health agencies which, to a greater or lesser degree, are currently affecting most hospitals, are in a sense special problems, each worthy of separate and more lengthy discussion. In general, evolution of the role of the hospital in the community, as observed contemporarily in different quarters of the world, seems to follow the lines and concepts which were proposed by the promoters of the integrative approach to community health care system a few decades ago. These are summarized by the First Expert Committee on Organization of Medical Care, convened by the World Health Organization in 1956 as follows:

"The hospital is an integral part of a social and medical organization, the function of which is to provide for the population complete health care, both curative and preventive, and whose outpatient services reach out to the family in its home environment; the hospital is also a centre for the training of health workers and for biosocial research".

The same Committee went on to say:

"Regarded in this light, the hospital should serve the whole community and offer facilities for the promotion of health and the prevention and treatment of all diseases. Its role is to save human life and to prevent disablement, and it should use all proven diagnostic and therapeutic measures to allow pathological states to be detected and treated at an early stage. To this end, the hospital should form an integral part of society in such a manner as to satisfy human needs, as well as financial, administrative, and social requirements. The task of the general hospital is thus to link together all aspects of the healing art and to prevent disease. However, it is essentially an instrument in the service of society, and cannot arrogate every form of medical service to itself".

2.3 Redefinition of hospital functions

The problem of the hospital role in the community has been consequently put in a much wider context: Should the hospital, in addition to its three traditional functions, treating patients, undertaking research, and educating health personnel, also add other medical functions
such as promotion of health, prevention of disease, rehabilitation, health education of the public, etc.? The evolution of concepts in this field can be reflected by a few examples taken from both the national and international forum (quoted by K. Evang).§

In 1948 the American Hospital Association and the American Public Health Association issued a joint statement on "Coordination of Hospitals and Health Departments". This statement has emphasized the key role of the general hospital serving the health of the community, both as regards quantity and quality of health services, stressed that preventive and curative medicine have reached a stage where they are no longer separable, and strongly recommended the joint housing of hospitals and health departments, and, if possible, also the offices of practising physicians and dentists. This would, it was contended, be of mutual benefit, adding greater prestige to the hospital as a community centre for all health and medical activities, while at the same time the health department would attain new stature, dignity and public understanding. The follow-up and preventive work of both parties would be facilitated, patients and physicians would save time because the doctor's office would be in the same hospital building. Duplication of work, for instance, of the public health departments, public health nurses, and the hospital social workers might be prevented. Medical staff might mutually be used for the instruction of nurses, etc. Public health officers would by necessity see more of hospital administrators, and their common problems in hospital planning, construction and licensure would be facilitated. Joint programmes for the control of tuberculosis, venereal disease, and other communicable diseases, as well as for certain non-communicable diseases, might more easily be carried out. Special fields mentioned in which such arrangements might be of assistance are mental hygiene, maternal and child health, and education of the public in health matters.

In 1952 the Central Health Services Council in the United Kingdom presented its well-known "Report on Cooperation between Hospital, Local Authority and General Practitioner" suggesting that the hospitals and the local health departments might work together and support one another in various fields, such as maternal and child welfare, tuberculosis control, care of the chronic sick, mental health, dental and ambulance services. Again the unity of purpose of the two branches of health activity has been explicitly stressed.

The International Hospital Federation held its eighth congress in 1953 with the general theme: "Preventive medicine as a major function of the hospital". The following concluding definition of the functions of the hospital was reached:

(1) to give adequate medical and hospital care to its patients;

(2) to teach medical, technical, and professional personnel;
(3) to take part in research programmes in the hospital and medical fields; and

(4) to foster and promote the public health and preventive medicine programmes of the community.

The conference of the Ministers of Health from Socialist Countries, held in Varna in 1956, reviewed the role and functioning of hospitals in those countries and stated that the development of hospital services has been properly based on the integration and regionalization of the total health care for the community, and covered, as a rule, prevention, treatment and rehabilitation, as well as research and teaching functions. Possible ways of integrating some social care functions with hospital services (e.g. for aged or disabled) were also considered.

The final redefinition of the contemporary hospital's functions has been again proposed in a WHO forum. The above-mentioned Expert Committee on Medical Care Organization summarized the functions of a general hospital as follows:

1. **Restorative**
   - (a) diagnosis: as an out or inpatient service;
   - (b) treatment of disease: curative and palliative, involving medical, surgical and special procedures;
   - (c) rehabilitation: physical, mental and social;
   - (d) care of emergencies: accidents and disease

2. **Preventive**
   - (a) supervision of normal pregnancy and childbirth
   - (b) supervision of normal growth and development of child and adolescent
   - (c) control of communicable diseases
   - (d) prevention of prolonged illnesses
   - (e) prevention of invalidism, mental and physical
   - (f) health education
   - (g) occupational health
3. Educational
(a) medical undergraduates
(b) post-graduates: specialists and general practitioners
(c) nurses and midwives
(d) medical social workers
(e) other allied professions

4. Research
(a) physical, psychological and social aspects of health and disease
(b) hospital practices, technical and administrative

The point had obviously been reached when clarification was necessary, and at the Tenth World Health Assembly in 1957 the topic chosen for the technical discussions was "The Role of the Hospital in the Public Health Programme". In his working paper for those technical discussions, J.M. Mackintosh developed his version of this philosophy of the hospital as a centre of health. One of his main points was the desirability of making the outpatient department the "real headquarters" of the hospital, a "centre for the deliberate promotion of health by educational methods", a "filter" for the psychiatrists for dealing with early cures, the only channel for admissions of patients to and discharges from the hospital, preferably also "designed to provide home care services". The outpatient department should in fact "become the regular meeting place for hospital consultants, health officers, and general practitioners". To this end he has urged "joint housing of hospitals and health departments".

He felt that the hospital should be more limited in its operations in the broader realm of health protection and advocated the introduction "throughout the hospital system of a concerted programme for the prevention of sickness and promotion of health", including health education, field epidemiology, and mass immunization. An independent department for socio-medical activities should be established within the premises of the hospital.

He also stressed the desirability of the free flow of patients in two directions; not only from the local and intermediate to the more specialized hospital, but also vice-versa (which is still, surprisingly, more difficult to achieve). He even felt that transfer of staff and equipment temporarily from the specialized to the less specialized hospitals might be practicable as one of the means for establishing a regional utilization of a group of hospitals. The health centre should be given facilities to supply simple equipment for the use of the general practitioner in the home.
Mackintosh recognized the problems of organization deriving from such widening of the programme in the following statement:

"On this analysis it would be easier to accept the definition of the hospital and its functions if the term hospital service were substituted for hospital. A single institution could not of itself provide all the functions cited above; and if several institutions were under consideration, some coordinating mechanism would obviously be necessary" (quoted by K. Evang).

Most participants were willing to go a long way to accept Mackintosh's emphasis on further strengthening of the outpatient department, the research and educational functions of hospitals, and the relationship to the general practice in the neighbourhood. Opinion differed considerably on his main thesis that the hospital be developed into a combined centre for most health activities. It would appear more realistic to regard the hospital as one part of the complete health service organization than to try to make it act as a centre for all health problems.

It was emphasized that caution should be exercised not to overburden the hospital with work. Everyone agreed, of course, that close liaison is necessary between the hospital and the health administration in questions of communicable diseases, nutritional deficiencies, etc., but few saw any advantage in putting the officers of the public health administration in the hospital itself and making most of their functions a part of the hospital's overall activities. Obviously there are many aspects of health which should not be the direct concern of hospitals, for instance environmental sanitation or mass vaccinations which could be performed more effectively, and even more economically, by public health agencies or health centres.

More recently the objectives of the hospital's participation in public health work has been identified in the early detection of illness and in continuous care of the chronically ill. Some hospitals screen inpatients as a routine for certain diseases, while others, fewer in number, have the facilities and organization to undertake multiphasic screening of both inpatients and outpatients. The extension of the hospitals' outpatient and domiciliary services for the chronically ill has established new lines of communication between the hospital and the outside providers of care, aimed towards the integration and continuity of medical, rehabilitation and social elements of patient welfare.

As is to be expected, conditions and problems vary so widely from country to country that agreement on details, and sometimes even on principles, can hardly be reached. Nevertheless, there is no doubt that reconsideration of the role and redefinition of the functions of the contemporary hospital have evidently influenced in recent years the organizational patterns of medical care services all over the world.
2.4 Organizational implications

The content and scope of hospital services are becoming wider everywhere. In addition to the bed care of the seriously sick, the hospital, in nearly all countries, has been giving proportionately more attention to outpatient services and also to professional education and medical research. This is quite apart from the widening range of diagnostic and treatment services offered to inpatients as a result of advances in medical science. In fact, many new medical procedures are so complex or delicate that they can be carried out only in hospitals where expensive equipment and qualified technical personnel can be assembled. But, at the same time, the importance of the "bed section" is decreasing and the concept of health centres without beds (or even bedless hospitals) is developing. The "hotel function" which was predominant in the past is gradually being superseded by the "medical function".

Generally speaking, in the economically developing countries, the range of hospital services tends to be very wide, especially in rural areas. In such areas other medical resources are often lacking, and the hospital must be a centre for the preventive health service as well as for all aspects of treatment. This is more obvious in public hospitals than in voluntary institutions.

In a few countries, the broad concept of the hospital as a centre for all health services in an area has taken on special significance. This is, for instance, the philosophy of the Chilean National Health Service and also of health systems in the socialist countries. Administratively, the hospital director in these countries is responsible for all health activities, including the outpatient, domiciliary and the preventive services in the area served by his hospital. In many countries, the local or district hospital is also made responsible for smaller outpatient service health centres around it. In the United States of America, the concept of the hospital as a generalized "community health center" has been widely discussed but has not yet been implemented, except in a few places. In the United Kingdom, the concept of the fully general hospital - with acute, chronic, mental, and other special patients being served flexibly under one administration - has been advanced but applied only rarely.

There is no doubt, however, that everywhere the hospital is playing a larger proportionate part in the community health services as a whole. Its share of total health expenditures over the last several decades has gradually been rising, not because of price inflation, which applies to out-of-hospital services as well, but because many services formerly offered outside hospitals or not offered at all are now part of the normal hospital programme. Many health leaders are concerned about the
need for greater strengthening of out-of-hospital services, which are generally less expensive and more oriented towards prevention. Nevertheless, the widening scope of health services coming under the wing of hospitals - for both inpatients and outpatients - has an important hidden advantage: the establishing of services within an administrative framework in which they may be more readily integrated. Such integration, in the long run, ought to result in greater economy and higher quality of service.21

The concept of hospital regionalization, one of the richest in present content and future potentiality, has been more widely adapted. As medical science has advanced, increasing specialization has become necessary, particularly in hospitals. However, not every hospital can provide services in all the medical and surgical specialties; it is neither feasible nor reasonable in terms of the cost and the numbers and distribution of people to be served.

The solution proposed for this problem in many countries has been the concept of "hospital regionalization", which involves the establishment of a network of hospitals in a geographical area, so that patients are treated in a hospital appropriate to their medical needs - neither too simple nor too specialized. Thus, throughout the region and especially in rural areas there might be a number of small general hospitals, close to where the people live, capable of treating the common ailments (e.g. injuries and other conditions requiring minor surgery, respiratory tract infections, normal maternity care, rehydration of infants, etc.). At the next level, and perhaps in the medium-sized town, might be the "intermediate" hospital (100 - 300 beds) providing a fairly wide range of medical and surgical specialties for the more difficult cases, such as serious infections, major abdominal surgery or severe injuries. At the centre of the region, probably in a large city, would be a "base" hospital or regional medical centre (with perhaps 500 - 1000 beds), in some cases associated with a school of medicine. Here would be located the full range of specialties, including the "super-specialties" such as brain and cardiac surgery, and complex radiation therapy. In the intermediate and regional hospitals, however, there would be also some beds reserved for treating persons with the simpler conditions who live nearby.

This framework of hospitals should function in two directions: referring patients from the peripheral towards the central facilities, and arranging for certain consultant services and technical supervision to pass from the central or intermediate levels in the opposite direction.

The full implementation of the regionalization idea applies to a continuum of health service, starting from the person who is still in his own home and requires only outpatient care or perhaps medical or nursing care at home. The outpatient department of the hospital at all echelons in the regional network can provide such care, or it can be provided at health centres or rural health posts. In the more industrialized countries,
such care is mostly provided in the surgeries or clinics of individual doctors (whether they are paid privately, by an insurance fund, or by a public agency). In the same way, home care of the patient may be arranged by a hospital or public health agency (e.g. the provision of home nurses) or by general medical practitioners. Finally, regionalization may be also extended to include the personal preventive services, such as immunization or periodic examination of children and adults.

Whether this full spectrum of out-of-hospital and hospital services, general and special, is systematically regionalized or not, it exists to some degree in all countries. The degree of integration and coordination, however, varies with the overall administrative policy of countries in the same way as does the pattern of hospital authority. In the countries with the most localized patterns, numerous voluntary efforts are encouraging coordination, even though hundreds or thousands of autonomous medical personnel and establishments are responsible for day-to-day medical care. A large sector of private medical practice, both outside and inside hospitals, present the greatest challenge to coordination. In the moderately centralized countries, regional coordination is being actively achieved within hospitals, but is still poorly developed in the out-of-hospital services. In the most highly centralized countries, the non-hospital services and preventive programmes tend to be most closely integrated with hospitals at each of the regional echelons.\footnote{21, 10, 22, 23, 25, 28, 29, 30}

It is clear that the concept of regionalization is gaining ground and will eventually win general acceptance, but since it entails the integration of individual hospitals into wider groupings it inevitably results in a progressive diminution in their autonomy. The hierarchical organization of facilities and staff, the establishment of hospital equipment funds at the regional level with a national equalization fund, the increasingly important role of social security - all these factors make the trend towards regionalization of the hospital system inevitable. The importance of the medical care system is increasing with advances in medical science, in social organization and in the overall economy, but the individualism of the traditional hospital, characterized by its curative role and that of providing food and shelter, is doomed to gradual disappearance.\footnote{5}

3. **FINANCING THE HOSPITAL-BASED MEDICAL CARE**

3.1 **Ownership patterns**

With the multiple origins of hospitals, it is evident that most countries today have a mixture of hospital ownership. The proportions of the mixtures are constantly changing. Moreover, it is evident that there is a world-wide trend towards a greater proportionate ownership and direct operation of hospitals by governmental authorities.
Hospitals may be classified by ownership into three types: government-owned, voluntary non-profit, and profit-making or proprietary. The relative distribution of hospital ownership in a country is of great importance to hospital planning. If hospitals are owned by bodies other than the government, it is obviously more difficult to integrate the operation of those hospitals within a national system than if all hospitals are owned by the government.

In some of the highly developed countries, like the United States of America and Canada, local and voluntary enterprises have still greater importance than governmental authorities - for health and welfare services as well as for sectors of the economy. In the United States of America, the majority of hospital beds, about 65%, are owned by national, state or local governmental authorities, but the figure is somewhat deceptive since these beds are largely in mental and tuberculosis hospitals serving long-term patients. In general hospitals, which account for 95% of all hospital admissions each year, 67% of beds are non-governmental - whether voluntary non-profit, church-supported or proprietary. In Canada also, despite its national social insurance programme for meeting the hospital costs of the entire population, the actual ownership of general hospitals is predominantly by voluntary bodies.

In the other highly industrialized and urbanized countries, it is local government (rather than a voluntary body) control of hospitals that explains the "moderate centralized" authority pattern. In Sweden, for example, almost 84% of the beds are in the government hospitals, counting both general and special facilities. It is local units of government rather than central that own and operate them.

In countries with very highly centralized hospital authority patterns, the ownership is naturally at a corresponding level. In Malaysia, while as many as 17% of the beds are not controlled by the Government, they come under strong government influence, and 83% are owned by the central government. In the socialist countries, virtually 100% of the beds are owned by the central Ministry of Health. In the United Kingdom, with its National Health Service, it is about 96%. The day-to-day management of these hospitals is nevertheless delegated to administrative bodies closer to the scene of operation: in Malaysia, to state public health authorities, in the socialist countries to province and district, and in the United Kingdom, to regional hospital boards. The ultimate powers of decision, however, rest with the central ministries of health in these countries for nearly all institutions.

From these varying patterns of ownership, many implications arise for hospital operations. The countries with more centralized ownership can maintain greater uniformity in internal hospital practices; the more localized patterns show greater diversity. In spite of this, it is interesting to observe the flexibilities that tend to emerge even in the
hospitals of centralized national cultures, where local imagination or initiative begins to express itself; the national standards tend to set a floor but not necessarily a ceiling on hospital services. On the other hand, in the more localized cultural settings, many uniformities tend to develop because of the influence of hospital legislation and also because of non-governmental efforts at maintaining quality performance.\footnote{21}

3.2 Sources of finance

Regardless of the ownership of hospitals, their financial support throughout the world is predominantly from social sources. This applies to both construction and operation. By "social sources" is meant not only various levels of government, but also social insurance, and even voluntary insurance, voluntary subscriptions, charitable and corporate funds and grants from outside the country (all types of so-called "indirect payment") as distinct from private (or direct) payments by sick individuals.

The evolutionary sequence can be conceptualized in terms of the mounting costs of medical care and the degree to which health care is accepted as a social service, and can be defined operationally according to the dominance of the following hospital reimbursement schemes:

(1) hospital services financed from private sources;
(2) hospital services financed through voluntary insurance;
(3) hospital services financed through compulsory insurance;
(4) hospital services financed from general taxation.

Each successive category can be seen as a plateau which, once attained, becomes the base point for advancement to the next stage. Although social upheavals have caused the shipping of stages, transition is always towards greater public provision of health services.\footnote{22}

The sources of financing of hospital construction are closely connected with the pattern of ownership. The cost of operation of a hospital is, however, a much larger question. The life of an average hospital building in recent times may be 40 - 50 years or more (this is highly variable, of course, depending on the style of construction). The cost of construction is equivalent on average, to only about two or three years of operating costs. Not only are the operating costs very high compared with construction costs, but they are also naturally more sensitive to the changing requirements of medical science, to economic inflation, and to other changes occurring in a nation from year to year. It is probably true to say that a local community can seldom afford the total cost of the health services that its population needs.
In countries with the most localized hospital authority patterns, the financial support of hospital operations tends to be the most highly diversified, but consequently more and more difficult to coordinate. In the economically weaker countries of this type, where the majority of the people are poor, the government usually makes a larger relative contribution to hospital operating costs.

In the economically stronger countries of the moderate authority pattern (e.g. France, Sweden), hospital costs are divided almost entirely between general government revenues and social insurance. Very little money is derived from voluntary insurance, charity or private payments.

The financial support of hospital operation in the most highly centralized nations is the easiest to describe because it is the simplest. The USSR and the other socialist countries meet nearly all operating costs from the revenues of the central government (even though part of the construction cost may have come from local government or collective farm resources). The authority to spend the money is delegated through an administrative hierarchy from the national to local agencies, but the origin of the money is central. In the United Kingdom, with its National Health Service, over 90% of hospital costs are met by the Ministry of Health and about 85% of this money comes from the general revenues of the central government; the balance comes mainly from a social security fund (devoted mainly to providing non-medical benefits, e.g. old age pensions, disability insurance, etc.) and from other small sources (private payment, voluntary health insurance, etc.).

In the less economically developed countries with highly centralized authority pattern (e.g. Togo, Malaysia) the vast bulk of hospital operating costs also come from the central government. But the budget allotted to each hospital far from covers the minimum requirements as it is generally not calculated on the basis of need but simply granted from the available resources. Thus, it not infrequently happens that the patient's family has to feed him and to buy drugs and dressings in the market. In none of these countries does the social insurance or voluntary health insurance play any part.

### 3.3 Mechanisms

The precise method of collecting the money or preparing budgets for hospital operation tends to correspond to the patterns of financial support just reviewed. Where there is a diversity of sources, the hospital management must usually undertake accounting procedures to calculate the average cost-per-patient-day or even the cost of specific items of service, such as laboratory tests or a drug injection. These amounts are then charged to the individual patient or the responsible agency (insurance fund, governmental department, etc.) for services provided. The hospital authorities expect that by the end of the year, assuming a certain
occupancy level, all the earnings necessary to meet the total annual budget will have been collected. In practice, however, hospitals using this system may earn a "profit" or suffer a "loss" depending on many circumstances. The need to avoid losses may sometimes result in the medically unjustified admission of patients or undue prolongation of the stay of convalescent patients. Such a system does not promote efficiency in the hospital system and its use is therefore not a sound health policy.21

In the countries where authority is most centralized the mechanisms of hospital financing tend to be simpler. An annual budget, that is an estimate of all the anticipated costs of personnel, supplies, etc. is prepared. This amount is then allocated through some sort of hierarchy to local units of government and finally to individual hospitals. The budget is initially prepared by the hospital management but is subject to review at higher echelons.

Between the two extremes, the countries of moderately centralized authority patterns use systems of hospital budgeting that are, in a sense, a combination of both the above methods.21, 21, 9

It is evident that the financial support of hospitals, in terms of both sources and mechanisms, is intimately related to the whole system of hospital organization in a country. There is perhaps no economic factor that influences the quality of medical care in a country more than does the amount of financial support given to its hospitals. This is in turn largely dependent on the degree of social, as opposed to purely individual, financing. When large groups of people, perhaps even the entire population of the country, are financing hospital services, there is naturally more concern about the efficiency, economy, and effectiveness of the services than when hospital operations are supported solely by the small percentage of persons who at any moment happen to be sick. Therefore, the social and largely governmental financing of hospital services, while it takes different forms in different countries, is nevertheless leading everywhere to increased organization of hospitals, both internally and in larger geographical areas, in the interest of both economy and quality. In financial terms, it leads to a progressive integration of the hospital system in the health sector and also to the creation of national and regional hospital funds that collect money from different sources and share it among the various elements of a hospital-based health service according to the justified needs.

4. INCREASING THE EFFICIENCY OF HOSPITAL SERVICES

4.1 Evaluative criteria

At best, the objective of each medical care programme is to provide the population with medical services that can cope with health needs
and demands in a comprehensive quantitative and qualitative manner by the best utilization of available resources (human, financial and material) within given constraints. This means that the value and justification of medical care services should be gauged from the following criteria:

(i) the appropriateness of the services in terms of their impact (or potential impact) on the health status of the population;

(ii) the adequacy of services in terms of allocated means to achieve the stated objectives;

(iii) the effectiveness of the services, defined in technical and operational terms, which characterize the measurable contribution to the stated objectives made by the accomplishment of the operational activities;

(iv) the efficiency of services in terms of the optimal use of resources in achieving the operational aims.

To increase the efficiency of medical care means, in practice, the attempt to obtain an acceptable high level of attainment of objectives (higher effectiveness) at minimum cost, that is, in economic terms, to maximize output at a fixed level of resource input or, alternatively, minimize resource input at a fixed level of output.

In general, three theoretically priceable outputs (products) are generated by a medical care delivery system:

(i) the physical assets of the system (as equipment, supplies, and real estates) and manpower;

(ii) the production value of the medical, paramedical and ancillary personnel, in terms of medical services;

(iii) the social value of medical care services, in terms of their impact on health status and satisfaction of population served (ultimate outcomes of medical care).

More complete conceptual and empirical exploration of the efficiency of medical care and its components is still needed. But the search for perfection should not blind one to the fact that present methods of assessing the efficiency of medical care, and especially hospital services, have revealed a range of quality from outstanding to deplorable.2/1, 2/1, 13/1, 24/1

Considering the methods by which hospital-based medical care can be improved in effectiveness and efficiency, the emphasis should be either on the proper allocation of resources (allocative aspects) or on improvement of operational activities (operational aspects). In this
paper, the scope of concern will be, of necessity, limited to some relations between the role of the hospital and methods of financing the hospital services and the above-mentioned aspect of efficiency.

4.2 **Allocative aspects**

The national income data, indicating the enormity of the resources expended on health care services together with the results of social surveys indicating substantial unmet medical needs - which presumably could be dealt with only by allocating still more resources to the health sector - have forced some rethinking about the necessity of improved efficiency. Furthermore, the increasing difficulty of obtaining resources coupled with increasing demands arising jointly from unmet needs and rising expectations have forced the health care personnel and planners to acknowledge that national resources are not unlimited and that other sectors of the economy have equally legitimate claims for a share of the limited national resources.

The broader aspect of allocative efficiency refers to society at large, thus providing a crucial measure of the appropriateness of the level of investment in the health sector. The relationship between demand and supply varies among health care systems, but whether the market, the government, or some other intermediary performs the distributive function, allocative efficiency is approximated when the costs and benefits are weighed in relation to the sum of society's desires. Thus allocative efficiency is facilitated to the extent that the responsiveness of medical supply to demand is neither greater nor lesser than the supply of other goods and services to demand. Whereas over-responsiveness of medical supply to demand would prevent the achievement of allocative efficiency by increasing expenditure for the expansion or improvement of health care services, when the benefits to society from a similar investment in another sector of the economy would be greater, under-responsiveness would reduce allocative efficiency by depriving the health sector of funds which would produce greater benefits than a similar investment elsewhere in the economy.

The narrower aspect of allocative efficiency refers to the appropriateness of resource allocation within the health care sector. It should be noted here that the optimal type of hospital as we know it today, meaning a specialized, adequately equipped medical institution, staffed permanently by specialists, represents an admirable and often highly successful instrument for its specific purposes and catches the public attention. As a result, an over-responsiveness of hospital service supply to the demand has been developed which prevents the achievement of allocative efficiency.

In some developing countries it leads even to tragic results as the highly specialized, highly technical, and sometimes commercialized curative medical care for the very few selected patients, with the support of the
politicians and the population, and sometimes also the doctors, obtains the lion's share of the available funds and personnel. But such "chrome and nickel" hospitals, where super-specialists cure previously hopeless cases with "wonder" drugs and methods do not improve the health condition of such a country if this means that promotion of health, prevention of disease, and the broad mass application of medical knowledge to the needs of the population are neglected. As a matter of fact, such a situation may even hamper the development of the priority items of health services, and thereby contribute towards a deterioration of health conditions. By making the hospital an integrated part of a nationally planned and comprehensive health service, a better balance in allocative efficiency may be established from the beginning. No doubt, there exists also at present a strong need in many developed countries to strengthen the preventive parts of health services in relation to curative medicine as exercised at hospitals.

The tools which have been developed to assess allocative efficiency are among the newest and therefore the most controversial. Although both cost-benefit analysis and PPBS (Planning, Programming and Budgeting Systems) are extremely appealing in terms of their neat logic and apparent simplicity, their application in health care is still limited, mainly due to difficulty in expressing costs and benefits of medical care services in terms of some common unit (e.g. money).

4.3 Operational aspects

Rising costs and changes in the pattern of medical care services have also influenced the growing interest in their operational efficiency. It is well known that the most expensive part of medical care services is inpatient hospital care. The more that this can be reduced, therefore, without lowering standards of care, the lower the total costs to the community. Ideally, inpatient care should be restricted to those patients whose medical condition can only be effectively diagnosed or treated by residence in hospital. Unfortunately, this is not the case. Some patients may be admitted to hospital for social rather than medical reasons. Others may be admitted for the convenience of their medical practitioner and, in some remote areas, this may be the only way to fit them into the health system. Yet others may be admitted to hospital simply because the community does not have the necessary alternatives such as outpatient or ambulatory treatment and diagnostic centres, home nursing and care services, patient transportation service, etc.

In deciding whether a patient should be treated in hospital, and, if so, how long he should remain there, a knowledge of appropriate marginal cost estimates (including non-financial opportunity costs) may encourage doctors to use facilities more efficiently and to look
for suitable but cheaper alternatives of care. Monitoring the behaviour of the medical care system, i.e. assessing the factors that affect the allocation of care among different types of conditions and different types of patients, may produce information that will bring about conscious improvement in decisions. Furthermore, if health authorities can specify a preference function indicating the relative weights attached to different health service outputs, economic analysis may suggest an appropriate optimizing model in which this may be incorporated.

A different group of problems is associated with the efficient technical production of a given set of health services. What are the effects of hospital size on the cost of providing care? How do changes in the relative quantities of doctors, nurses, beds and other inputs affect hospital output? What determines the extent to which the capacity is utilized? How does the progressive patient care system reflect itself in effectiveness and efficiency of hospital care? How can the relative costliness and productivity of different hospitals be assessed? What is the relative value, in terms of their effectiveness and efficiency, of some alternatives and substitutes to hospital care (e.g. domiciliary care, outpatient care, day-or night-hospitals, etc.)? Answers to questions such as these provide health authorities with information for improving hospital operational efficiency.

A recent development in assessing the operational efficiency of hospital services is the shift from a hospital-oriented approach (e.g. average length of stay, number of discharges, average cost per patient-day, occupancy rate, staffing levels, etc.) towards a patient-oriented approach (cost per case, intensity of care received, index of complexity, etc.). A patient-oriented approach will also facilitate the transition from curative (or institution-centred) to preventive (or patient-centred) hospital-based medical care.

Developments in the area concerned have invoked the help of many modern management disciplines such as system analysis, operational research and economics. The success of their work also depends on the setting up of inter-disciplinary teams including physicians, nurses, epidemiologists and medical administrators. The recent works in this field are examples of these attempts to model the decisions which patients, physicians and hospital managers take with respect to medical care, the demand for it, the delivery of it and the organization of their interaction. 11, 13, 15, 18

5. CONCLUSIONS

5.1 Policy considerations

Even a brief review of the situation indicates that a lot still has to be done to implement even better economical ways of organizing the
delivery of hospital and other forms of medical care in particular countries, so as to improve its outputs, i.e.:

(i) to improve the accessibility and acceptability of services thereby achieving more complete coverage of the population;

(ii) to improve the utilization of services (e.g. timely entry into and proper transfer within the medical care system, continuity of care, outreach, etc.);

(iii) to improve the quality of care provided with respect to available medical technology and logic of patient care;

(iv) to improve satisfaction with medical care on the part of consumers and providers;

(v) to achieve, in consequence, a greater and more favourable impact on the health conditions and health status of the population.

Although essentially output-oriented, national programmes in the field of development of medical care services, of which the hospital should be an interrelated part, should primarily concentrate upon the recognition and correction of inappropriate inputs for the delivery systems of medical care, which hamper the development of its effectiveness and efficiency. Rational improvements in this field are mainly based on a sound national health policy which could be listed, for instance, in the following issues:

(i) Identification and implementation of a sound development policy with regard to medical care services, including such issues as: governmental responsibility, macro-allocation of resources, sources and methods of financing, eligibility standards, legislation, etc. A successful action in this field may directly contribute to the alleviation of such problems as insufficiency or mal-distribution of medical services within the inputs concerned, and poor coverage or poor utilization of services within their outputs concerned;

(ii) Elaboration and implementation of an organizational concept of a medical care delivery system, suitable to national conditions, based on regionalization, and including in its structure and functioning, integration of preventive, curative and rehabilitation services, channels of services (e.g. community, ambulatory and institutional), levels of services (e.g. peripheral, intermediate and central back-up services), and contents of services (medical technology)
for any intersection of channel, level and major service function. A successful action in this field may contribute greatly to increasing the efficiency of use of existing resources and, as well, to improving the quality of medical care (with respect to proper distribution of available medical technology and logic of patient care);

(iii) Elaboration and implementation of standards and criteria for planning and development of different tiers of medical care services which should comprise, for instance: (a) programming, design and building of hospitals and other medical care facilities, (b) staffing patterns, (c) equipment, (d) medical procedures, (e) investment and running costs, etc. Delineation and control of standards may play an essential role in the overall effort to enhance the quality, level and efficiency of medical care.

5.2 Need for skilled management

The evolution of adequate hospital and medical administrative capability for planning, designing improved services, managing and evaluating ongoing activities seems to constitute at present a highly significant factor for the sound development of medical care services. An inappropriate use of available resources is basically a fault in management. It may be that the administrators of hospitals and other medical care agencies are insufficiently trained. It could be that some counter-productive incentives are permitted to operate, thereby causing the dispensers and receivers of services to behave in an undesired manner. It could also be that insufficient knowledge of important constraints and operating conditions preclude good decisions. The problem of medical management could be solved only if all three causes can be alleviated together. This area of concern needs more intensive research and teaching efforts on the national scale and the development of essential information systems.

5.3 Community involvement

The public becomes a critical partner in defining the hospital's role and the type of services the hospital should deliver. The public's pressure for maximal efficiency in hospital and health care delivery stems from the opposition between rising costs and increasing need for service. Another factor influencing the public's opinion about the role of the hospital and the services it should deliver is the increasing knowledge about health, the possibilities of health care, and the actual delivery system. Formal and informal health education has made the public increasingly health conscious. People have been made aware of the importance of vaccination, of check-ups, of early consultation of a physician when certain symptoms appear. Therefore, they demand that these services are available. Also in the field of curative medicine, the public knows of the progress made.
The public has also gained insight into the health care delivery system. For a number of reasons, one of which is the increase in costs, the health care delivery has changed, at least partially, from a "private enterprise" to a public service. The degree to which this has taken place varies from country to country, but the trend cannot be denied. Along with this development goes the fact that health care has become a "public and political issue" in the planning and organization of which the potential patient - the consumer - wants to be involved. This takes various forms, from involvement in advisory boards to participation in policy making bodies.
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