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TECHNICAL DISCUSSION

SOME ASPECTS OF PLANNING AND ADMINISTRATION OF HOSPITAL SERVICES

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## I INTRODUCTION

The scope of activity of hospitals, which in mediaeval times were the only existing medical institutions and as such of great importance, has since expanded to embrace community activities of a public health nature. Hospital administrators are sometimes at a loss to cope with the broadened scope demanded of them and do not always understand what the true function of a hospital should be within the framework of the general health service. In actual fact, however, hospitals, even if unaware of it themselves, have always constituted a part of the community public health organization and have always played their part in solving the epidemiological problems of the time. For instance, as soon as the seriousness of infectious diseases was realized, the hospital services participated in their treatment and isolation. The epidemiological situation has since changed, however, and we are now more concerned with chronic disease than with infectious disease, especially in the more developed countries. General hospitals are now playing their part by participating in the treatment of acute exacerbations of chronic disease.

## II FUNCTIONS OF A GENERAL HOSPITAL

In recent years, increased demands have been made upon hospitals by the public health authorities, and the time has come for a re-evaluation of the function of the hospital within the general health service. The first question which arises is: should community medical care be hospital-orientated? It would appear preferable for the hospital to be integrated into the general framework of all the community health services, rather than for those services to be integrated into the hospital. To overburden the hospital with too many community services would only defeat our aims.

It is essential to differentiate between hospitals in rural and in urban areas. In rural areas, community care would perhaps be most effective if it were orientated towards the health centre rather than

towards the rural hospital. The health centre is an excellent medium for coordinating and providing both the curative and preventive aspects of general medical care as well as, to some extent, its promotive aspects.

To define: "health centre" was an institution whose medical practitioner and general nurses provided the complete range of medical services of which they were capable, but no form of specialised service. In the "rural hospital", on the other hand, there was a certain amount of specialisation, according to the specific disciplines. Although that did not perhaps apply at present to all countries, with development a certain degree of specialisation would result even at the level of rural hospitals.

#### The functions of a Rural Hospital

Rural hospitals usually serve a well-defined population. In the first place curative medicine, is an essential feature; it is also necessary even in a rural area, to furnish emergency services and to provide for rehabilitation of patients, which forms an integral part of the duties of any hospital. In the sphere of promotion of health and prevention of disease, the rural hospital is better employed on a consultative level rather than to render service directly. It can have a certain influence on the community as a whole, but it is doubtful whether it can have any real influence on the individual who spends only brief periods in the hospital. The rural hospital should always endeavour to work through the general practitioner and the public health nurse rather than to render a direct service to the community without the medium of those two professional groups. Is it really necessary for a woman to attend a hospital in order to receive antenatal care? In rural areas especially, hospitals are generally at some distance, and it is usually easier for the mother to go to the local health centre or for a mobile team to visit her village.

It should be the duty of the obstetrician to ensure that the general practitioners in the district are competent to provide antenatal care. The paediatrician should be an expert not only in curative

matters, but also in such questions as the growth and development of children; he should act as an adviser to the general practitioner rather than as a direct giver of advice.

Even at the rural level, hospitals are participating in the fight against the spread of communicable disease, and they should therefore be able to hospitalize such cases.

In that connection, one point of extreme importance arises, namely the notification of communicable diseases, the need for which cannot be sufficiently stressed. In many instances, the hospital is the first place in which it is realized that a disease is of a communicable nature and it is therefore of primary importance that it should be aware of the necessity for speedy notification of infectious diseases. However, experience has shown that such notification is one of the weakest services encountered in hospitals, which tend to overlook its importance in the fight against communicable diseases.

Another duty of the rural hospital is teaching, on a very limited scale, and especially the teaching of nurses or nursing aides to serve in rural areas. The problem of finding girls of sufficient education to work in rural areas is a world-wide one, and the best solution perhaps is to be found in teaching and training girls locally.

With regard to the relationship between the various services within the rural hospital, it is necessary to think in terms of the maximum coordination possible between the curative, preventive, and promotive aspects, rather than in terms of "integration", which would appear to imply integration within one individual. It is doubtful whether one nurse can carry out all the different aspects of nursing service. If, however, the maximum coordination possible between those who render service from the hospital can be reached, then much will have been achieved.

The functions of the urban hospital

In urban areas, the picture is entirely different. In order to provide a regional hospital service, extremely complicated clinical and technical services have to be maintained. Urban hospitals rarely serve a well-defined population, different departments within the same hospital often serving different populations. For example, the more narrowly specialised services, such as neurosurgery, obviously serve a much larger population than the departments of paediatrics or medicine. The urban hospitals have become medical centres for diagnosis, consultation, advice, and for giving special courses of treatment. In many instances, however, treatment can at least be continued in the framework of the community health services - a change which has taken place over the previous 10-20 years. Twenty years ago the primary function of a hospital was to give treatment. Now it is rather to arrive at an accurate diagnosis which, in many instances, is the most difficult part of medical care. With the advent of modern therapeutics it has become much easier to treat certain specific ailments and that implies the maintenance of many different specialist services. In addition to the basic services, in the larger urban hospitals a wide variety of specialist clinical departments has to be maintained, as well as specialist services and equipment, which are often very delicate and expensive both to buy and to maintain.

Such a situation naturally changes our attitude towards the functions of these hospitals, and care has to be exercised not to affect harmfully the standard of specialist service which they are equipped to provide. They have become centres for consultation, both for in-patients and for out-patients, and serve as a point of referral for the more difficult cases. If, therefore, urban hospitals are burdened with problems which others can solve, they will no longer be able to solve those problems which others cannot. Another of their tasks is, of course, to provide emergency services.

What is the role of urban hospitals within the framework of preventive medicine? One important service is that of early rehabilitation, which plays a most important part when one of the main problems faced is chronic disease. The urban hospitals are also required to serve in a consultative capacity for such medical services as antenatal care, paediatrics and child guidance. They too have to be prepared to accept cases of communicable diseases and to notify them immediately.

The urban hospital has a much broader role to play in teaching than has the rural hospital. It can and should participate in teaching the medical profession itself. Although not all urban hospitals are university hospitals, the universities would be well advised to make use of the rich clinical material existing in many urban hospitals. Through lack of opportunity, students are sometimes deprived of the chance of seeing cases which they would often have to treat later in their professional life, whilst in a centralized university hospital they are liable to see a more specialized form of pathology which they will be less likely to see as the general practitioners of the future.

Urban hospitals should also maintain schools for qualified nurses and should participate in the training of laboratory technicians radiographers, physiotherapists, occupational therapists, and so on.

Another of their important functions is research. In recent years practical research has assumed such proportions that sometimes it is interfering with the running of the hospital and the treatment of the patient. A certain balance has to be reached whereby the urban hospital carries out clinical research, in order that the standard of medical care will not drop, and participates in social and epidemiological research. Once again, care should be exercised not to integrate all services within the hospital, but rather to integrate the hospital services within the general framework. Therefore, as far as social and epidemiological research is concerned, the general hospitals should be used, but only after careful planning and when all the possibilities have been examined in each case.

### III THE STRUCTURE OF THE GENERAL HOSPITAL

General hospitals should have in-patient services, out-patient services and emergency services. In rural areas there should always be certain basic clinical departments, for example, medicine, surgery, obstetrics, some gynaecology and paediatrics, together with the medical services required to maintain them (radiology, laboratory, pathology, and so on). The view has often been expounded that, in order to have a complete organization, there should be, in addition to the departments of curative medicine, a separate department of preventive medicine, but that would only defeat our aims. However, one service should be separate from the others, namely the service of public health nurses. Such a service should emanate from the hospital and this can be achieved if the director of the hospital has experience of public health and is competent to coordinate the different functions.

Urban hospitals should contain various specialties in addition to the basic clinical services mentioned above. It is impossible, however, to generalize about the nature of such specialties, which vary according to the needs of the area. Some of the more commonly required specialties, such as ophthalmology and ear, nose and throat diseases are even to be found in certain smaller urban hospitals. In larger hospitals, the whole gamut of medical services is in fact provided, e.g. specialized surgery, such as cardiac and neurosurgery - neurology and haematology - and there is even some hyperspecialization such as, for instance, endocrinology. Then again, urban hospitals provide special therapeutic measures, for example by radiotherapy, isotope therapy, and so on.

#### In-patient services

Should they be organized according to discipline or according to nursing units? If the latter, it is far easier to fill the available beds, and to solve the problem of one specialty having vacant beds, while in other specialties wards are overcrowded. Such a solution

cannot, however, be practically applied to the Eastern Mediterranean Region, for there the majority of the hospitals are organized according to the "closed staff system" which does not allow for a dispersal of patients into different nursing units.

The question of progressive patient care is a very thorny one. Although special provision should be made to provide intensive care for those in need of it, e.g. the unconscious or the extremely ill, the concept of progressive patient care is not practical in the Eastern Mediterranean Region. The question was thoroughly discussed at the International Hospital Conference held in Paris in June of this year, and, as a result of its deliberations, even the proponents of such care were left with doubts and resolved to examine the situation afresh.

Within the setting of the Eastern Mediterranean Region, there is therefore really no alternative but to allocate patients by discipline. Although it is difficult to decide that a patient "belongs" to a given discipline, nevertheless there are broad differences between, for instance, medical care and care requiring surgical intervention.

#### Out-patient services

Out-patient services have been established by most hospitals to counter the accusation of being ivory towers, but the pendulum has perhaps swung too far the other way. If general out-patient services are made universally available to the public, they can destroy a hospital by overloading the medical services which are its most essential feature. Such care should rather be provided within the community, with liaison between the general practitioner and the specialist, and the out-patient department should maintain a consultative character. After all, the hospital is used as a centre for diagnosis, because it contains skilled man-power and specialized equipment, and there is no point in using it to solve problems that can be solved at a different level. Out-patient services should comprise at least the same



disciplines as the in-patient departments, and in some instances it may be found necessary to have only an out-patient department providing specialist services on a consultative basis, e.g. ophthalmology and otorhino-laryngology.

A valuable service that can be performed by the out-patient department is the sifting of patients sent for admission to the hospital. It is well known that once a person is admitted to hospital he does not get out again very quickly. This is meant in no disparaging way, for there is a certain legal responsibility to perform all necessary examinations to eliminate the possibility of pathology - but much hospitalization can be prevented, with consequent saving of valuable bed space, if the out-patient department is used, where possible, in reaching the decision whether to hospitalize or not.

A type of service which it has been proposed in recent years should be taken on by out-patient departments is mass screening as part of the preventive health services. However, it is doubtful if such work can really be performed most effectively at hospital level. The individual practitioner, even at the health centre, with his more personal knowledge of the patient, is perhaps better placed to carry it out. Without going into the question of the efficacy of mass screening in general, it should merely be suggested that the out-patient department might perhaps be used for specialized screening after general selection by the family doctor.

#### Emergency services

The emergency services that must be provided by all general hospitals are extremely important and should be run by highly skilled personnel, not pushed into a corner and delegated to a junior as too often happens. It is in those very services that deaths occur which could be prevented given higher skill. The service should be available day and night, which makes it somewhat onerous, but it is a direct community service which the hospitals cannot be absolved from providing.

The proper place for the full range of emergency services is the urban general hospital, which alone has skilled personnel representing all the major disciplines.

#### Central Medical Services

Apart from the clinical disciplines already referred to, certain medical services are essential to any large general hospital, e.g. chemical, microbiological and haematological laboratories, as well as the radiological department. Hospital planners in the past tended to think in terms of numbers of beds, but bottle-necks often occurred through the existence of too many beds in relation to the existing radiological and laboratory services. A pathology department is also an important part of every hospital and is of course indispensable for teaching.

#### Blood Bank

A blood bank is not always essential, especially in urban areas, where a regional blood bank organization exists, but even in such cases the hospital should at least have its own blood-matching service to prevent the accidents which often occurred with transfusions.

#### Dental Service

The position of the dental department within the hospital varies from country to country. Although for purposes of consultation it is necessary to provide a dental clinic within any general hospital, care should be exercised to prevent it from becoming a general dental service, which should rather be provided within the community than within the hospital.

#### Pharmacy

In former times great stress was laid on having a hospital pharmacy equipped to prepare all the individual preparations that were prescribed. Nowadays, when most preparations are specific, it is more important to ensure the presence of a pharmacist with a wide knowledge of all the range of proprietary drugs now on the market.

### Social service

An important central service in the hospital whose proper utilization poses some problems is the social service. The social worker should be an expert on the social problems involved in medical care and should not provide direct services to the community but give advice to community social workers on the specific problems of medical-social work.

### Physiotherapy and Occupational Therapy

Physiotherapy and occupational therapy services are necessary for rehabilitation work.

### Anaesthesiology

Every hospital offering surgery requires an anaesthesiology service. With the growing size of hospitals, there is a growing tendency for every discipline to ask for its own anaesthesiologist, which leads to undesirable over-specialization.

### Central Sterile Supply

Another essential service is central sterile supply. The day has gone when nurses should be made to waste their time boiling instruments in sterilizers which, in any case, do not sterilize properly. Extensive research in recent years has shown that central sterile supply does not call for such a large area as had been thought and that with modern autoclaves it is possible to have a large turnover of instruments in a short time. Such a service should be available even in rural hospitals.

### Dietetics

This is also an essential service, but the question arises whether it is basically culinary or medical. Diet is of course often of great medical importance, but there is no need for the dietician actually to serve their food to the patients - this is a further example of the type of over-specialization which can destroy the real aim of a service.

### Medical Records and Statistics

In addition to the foregoing medical services, certain central technical services are needed, and among them the medical records and statistics service are very important. Reference has already been made to morbidity surveys in hospitals, and the examination of medical records can be a useful means of carrying them out, but it must be organized on a sound basis with the minimum of different forms and returns permitting an accurate analysis of the situation.

## IV ADMINISTRATION

### Supplies

The supply services should understand the requirements of the different departments and ensure that they have what they need to get on with their work, instead of acting merely as a procurement agency on request. In other words, "supplies should be supplied". There should be a well organized central kitchen able to provide hot food which is really hot and - even more important in tropical countries - food which had been kept really well chilled. Much diarrhoea occurring among patients admitted for entirely different reasons may be due to improper facilities in the kitchen.

### Maintenance

Proper maintenance services are a true form of "preventive medicine" for the equipment of a hospital. Too often maintenance departments have to undertake expensive repairs that could have been avoided by periodic examinations.

### Personnel

It is impossible to find staff ready-made for all the complex tasks to be performed in a modern hospital and arrangements must be made for in-service training, as has long been accepted by industry.

### Hospital Director

Regarding the thorny question of the qualifications of a hospital

director, what matters is not whether the person concerned is a medical practitioner or not, but whether he can run a hospital. Many lay-administrators can do so very well, and if there is no medical director the problem of medical supervision can be overcome by utilizing the services of the chief of one of the services. However, considering a hospital in relation to the broadest functions as outlined above, the coordination of all services must be entrusted to a medical man, whether he is called director or not. Another important person in the administration of a hospital is the chief of the nursing service, and a triumvirate of lay-administrator, medical director and chief nurse can be considered an ideal directing body.

#### Board of Governors

Most hospitals in the Eastern Mediterranean Region are under the control of the government or municipality, so the question arises whether it is really necessary to have a board of governors. Even in a state-owned hospital, however, it is valuable to have the public involved in its problems. This can be achieved by some kind of board consisting of lay people prominent in public life - for example, the local mayors or trade union leaders. The medical officer of health should be an active member of this board in order to ensure a liaison between the general health services and the hospital.

#### Committees and Lines of Authority

Special committees to deal with various administrative matters do not usually prove successful. It is better that the directors of the different departments should have clear-cut authority. Perhaps chiefs of medical departments should form or be represented on a general medical committee, but the medical director, if there is one, should be its chairman.

Another question related to management is how lines of authority should run. Should the chief nurse of a department take orders from the head of the nursing service, or should she be under the orders of the medical chief of the department? Both lines of authority must

exist: the chief nurse of a department must accept professional authority from the chief of the nursing service as well as administrative authority from the medical chief of the department.

## V SPECIAL PROBLEMS

### Nursing Service

Nursing is of course a service which cuts across all the other services in a hospital. In view of the shortage of staff, it is obvious that all nurses cannot be fully qualified, and also that some must be accepted on a part-time basis. It is also very important to make provision for in-service training. It is generally accepted that a newly qualified physician in spite of many years of study is still not a fully independent professional being, and the same applies to nurses.

### Psychiatric Services

A few years ago it was thought that the provision of psychiatric services by the general hospital was an ideal solution to the problem of psychiatry in the community, but it is now realized that only certain cases can be treated on that basis. How far psychiatric services in the general hospital have a preventive effect in regard to chronic psychosis in the community remains to be determined, and until then it is difficult to say whether every general hospital should have a psychiatric department or not. In general the best plan seems to be to provide for an out-patient psychiatric department, can do no harm, is not very expensive to run and does not involve too deep a commitment.

### Rehabilitation

General hospitals are sometimes accused of not providing sufficient rehabilitation services. There is, however, a tendency to exaggerate the importance of rehabilitation as a separate entity; it is a way of thinking rather than a separate discipline. There should be a consultant in rehabilitation, but he works best by influencing his

colleagues to become rehabilitation-minded rather than by running a separate service. There are also certain limitations to the possibilities of rehabilitation within the framework of the hospital: the patient cannot usually be kept in hospital until the end of the rehabilitation process, including the vocational and social aspects.

#### Communicable Diseases

All general hospitals should take in cases of communicable disease. It is wasteful to establish special communicable disease hospitals. Very few diseases call for complete isolation; what is usually required is rather barrier nursing.

#### Home-care Programmes

It is often claimed that general hospitals ought to provide home-care programmes, but the matter calls for re-examination. The best home-care service for the acutely ill can be provided by the general practitioners and the nurse. Whether the hospital should provide direct services for chronic diseases in the community is another question, but there too the problems can best be taken care of by the general practitioner and the public health nurse, with the hospital available as a centre for special consultation. The provision of domiciliary occupational therapy and physiotherapy carried out by the hospital as part of its home-care service seems a very wasteful and expensive arrangement. It is more efficient to provide transport for bringing patients in groups daily to the hospital for such treatment.

### VI PLANNING HOSPITAL SERVICES

In planning hospital services important questions are how to determine the number of beds required, the disciplines to be represented, etc. There is no universal solution, but generally speaking there exist two basic methods of assessing needs, the prospective and the retrospective. The prospective method is long and difficult to apply

because of the many imponderable factors involved - demographic, economic, socio-cultural, finally arriving at an assessment of morbidity patterns. The retrospective method, which consists of analysing the extent of satisfaction of demands - occupancy rates, average duration of stay, bed turnover waiting lists, bottle-necks, etc. - is simpler to apply, although the question of whether beds are being used to the best advantage is of course more difficult. The ideal method is perhaps to attempt a synthesis of the two approaches, making both a general prospective analysis and a detailed retrospective analysis, and attempting to correlate the two.

### Regionalization

Once a decision has been taken on the scope of the services required, the question of regionalization arises. The theory of regionalization is straightforward enough: a system of health centres, small hospitals, larger hospitals, central hospitals, etc. with a sort of shuttle service between them. In practice, however, the matter is complicated by such problems as hospitals being placed under different authorities and also, nowadays, increasing public sophistication. When regionalization was first envisaged, the public was much less interested in the organization of medical services than it is today and it may have been easier to shuttle the individual patient from one type of service to another as seemed to be indicated. Regionalization is an ideal to be aimed at, but more as a means of coordination than as a system for moving patients from one hospital to another as seemed to be theoretically required.

### The Hospital Site

The siting of an individual general hospital is often fortuitous: and happens to be offered, certain services are available in the neighbourhood, etc. Some general principles ought to be observed. First, the hospital should be centrally placed - not necessarily geographically but in relation to transport possibilities. The neighbourhood should be free of nuisances such as smells, smoke and