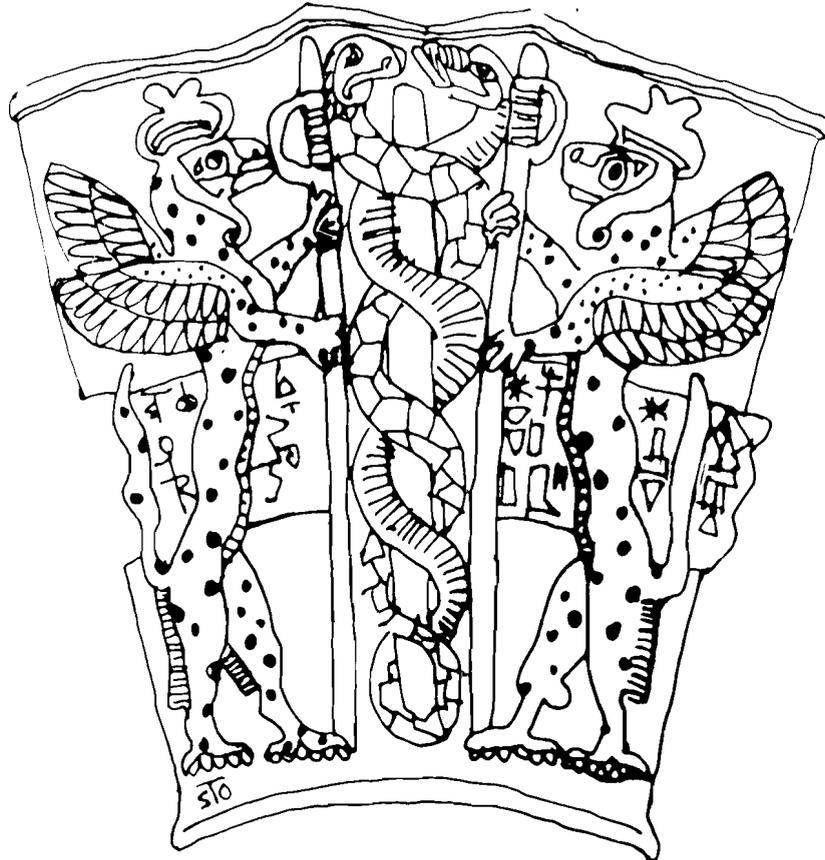


karachi, pakistan - march 19 - 24, 1973



CENTO SEMINAR ON
HOSPITAL
ADMINISTRATION



Cover : An ancient Sumerian caduceus

The caduceus is one of the oldest and most basic symbols to show a union of the four elements - the center wand representing earth; the wings, air; the snakes fire and water. It has been traced back beyond 2600 BC in Mesopotamia where it was considered the symbol of the god who cures all illness. The symbol and meaning were later adopted by the Greeks for the god Asclepius. Today it is still an international symbol of healing and medicine.

BEST AVAILABLE COPY

FOREWORD

The Central Treaty Organization first demonstrated a tangible interest in the problems of hospital administration by holding a conference on this subject in Tehran in 1964. Since that time, much has been done worldwide to improve health care in all its aspects. Far from easing the job of the hospital administrator, however, this general improvement in techniques and methodology has served to broaden his role and increase his responsibilities.

Bearing in mind these developments and their implications, the Sub-Committee on Health of CENTO's Economic Committee considered that it would be appropriate to review the accomplishments of the member countries in the field of hospital administration since the 1964 meeting. In particular, the Sub-Committee felt that attention might usefully be focussed on the training of the hospital administrator.

This is a report of the resulting Seminar on the Training of Hospital Administrators and the Review of Modern Advances in Hospital Administration which was financed by the United States Government under CENTO auspices and held in Karachi from 19-24 March 1973.

The team of U.S. consultants who attended the seminar and gave participants the benefit of their considerable knowledge and expertise comprised five members of the Veterans Administration Organization led by Dr. W.R. Merchant, Director of the Veterans Administration Hospital in Madison, Wisconsin. Their presentations, together with the excellent papers delivered by other delegates to the meeting, have been included in this publication. In some cases, in order to meet printing requirements, it has been necessary to delete or edit portions of these papers.

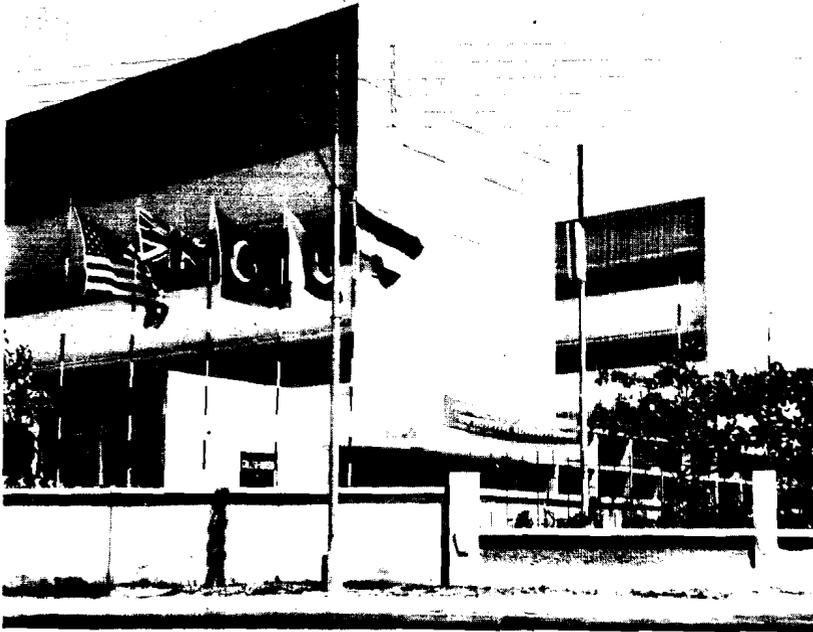
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Conference site: College of Nursing at the Jinnah Post Graduate Medical Centre, Karachi.



Delegates assemble before the inaugural ceremony.

INAUGURAL ADDRESS

by

*Mr. Abdul Waheed Katpar,
Minister of Health and Social Welfare,
Government of Sind*

I feel it a great privilege to welcome you to this long awaited CENTO Seminar on the Training of Hospital Administrators and Review of Modern Advances in Hospital Administration, which the CENTO Sub-Committee on Health decided to hold in my country in 1972. I am conscious of the fact that this seminar has been delayed very much but do hope that the CENTO Secretariat and the countries concerned will appreciate our involvement in various nation building activities which did not allow this opportunity earlier.

The subject of the seminar is of particular importance to us because we are on the threshold of launching a new health scheme, which is going to introduce a comprehensive health care system spread all over the country through a network of health institutions with district hospitals forming the nerve centre.

By using the terminology "health care" I think I have made it clear that these institutions are going to provide integrated preventive and curative services for promotion and restoration of health. It is obvious therefore that we are one of those countries who believe that hospitals have a greater role to play, not merely providing the traditional indoor treatment for the sick.

With the broadening of the role of hospitals in the modern world and with the technological advancement and increasing awareness of the community about their rights, the function of a hospital administrator is becoming more complex. Not only has he to be responsible for internal management, but it is his duty to create a business relationship between the hospital and the general public, the health professions, the trade union and other social and welfare institutions. Hospital administration is therefore emerging as a profession in its own right for which appropriate training is essential. Since the organizational pattern of hospitals varies from country to country and also the culture, tradition and socio-political beliefs of people, it is necessary that training should be related to the community which is going to be served. If hospital administrators for developing countries are trained in highly developed countries their training might be the cause of their becoming frustrated after they return to their home countries, besides not being useful for their people. For this reason we in Pakistan are giving stress to professional training within the country as far as possible and for that purpose have established a post graduate institute called Jinnah Post Graduate Medical Centre where post graduate training in basic medical sciences and clinical subjects is being imparted. The College of Nursing where we are holding this seminar is also a part of such an endeavour. We want to start a course on hospital administration in this centre and would like to seek regional cooperation in the matter.

Another aspect of medical care to which I would like to draw the attention of the scientists gathered here is the high cost of treatment, which developing countries cannot afford. Studies of the economics of medical care under different circumstances and in different countries should be continued and the hospital administrator's course curriculum should be so oriented as to give a bias to correlate cost-benefit relationship in management.

We in Pakistan have introduced the sale and manufacture of drugs under generic names in order to reduce the prices of medicines as a step towards reducing the cost of treatment and hope that our experience will be of interest to other developing countries.

The high cost of construction of hospitals is yet another problem which confronts us and perhaps other developing coun-

tries also face the same difficulty. Hospital administrators of today should also know how to plan and design a hospital to be able to assist the engineers effectively so that maximum benefits and facilities are provided at low cost.

I do hope that the experts who have gathered here will take these points into consideration in their deliberations and will come out with very useful suggestions and recommendations on the training of hospital administrators.

With these words, ladies and gentleman, I once again extend a hearty welcome on behalf of the Government of Pakistan and on my own behalf to all the distinguished delegates who have come from abroad, brothers from Iran and Turkey, the U.S. Coordinator, the distinguished consultants, the CENTO Secretariat staff and other honoured guests who have taken the trouble of coming to this city of Karachi from long distances. I hope they will find their stay enjoyable and comfortable.



*Meeting is inaugurated by Mr. Abdul Waheed Katpar,
Minister of Health, Sind Province.*

OPENING STATEMENT

by

*Dr. N. Aram,
Country Coordinator,
Iran*

On behalf of the Iranian delegation, I would like to express our thanks for your kind invitation to participate in this conference in the beautiful city of Karachi.

I am sure this type of meeting with the intention of exchange of ideas will be of great help to the progress of our countries.

The advanced technology of medicine today requires the establishment of a new method of management, especially in the field of hospital administration. Medicine and hospital services have a long history in this part of the world, but since the last Conference on Hospital Administration in Tehran, sponsored by CENTO, our countries have experienced many changes and witnessed new developments. Therefore I am confident that the exchange of views in this conference will help us a great deal and give us the opportunity to find better solutions for our problems related to the operation of medical institutions.

Once again, I would like to thank the CENTO Secretariat for organizing this conference and wish all success for it.

OPENING STATEMENT

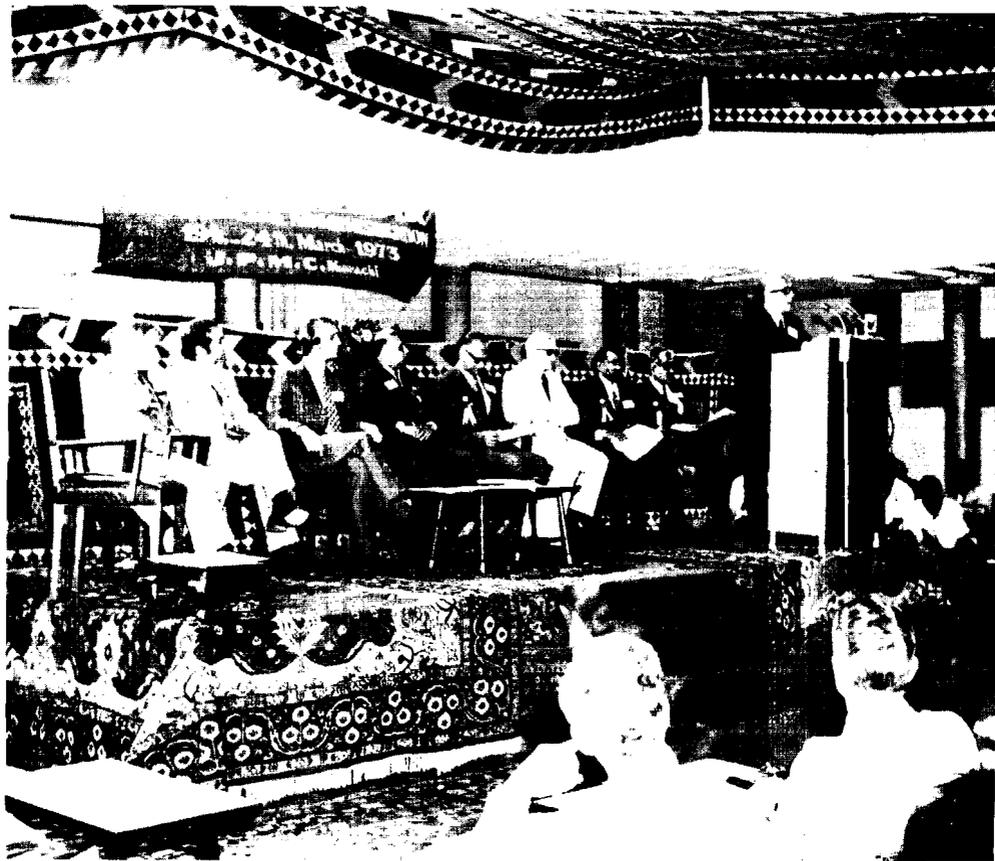
by

*Dr. Ekrem Okyay,
Country Coordinator,
Turkey*

On behalf of the Turkish delegation and on my own behalf I would like to express our deep appreciation for the wonderful and warm hospitality extended to us here. We also thank the CENTO Secretariat and related authorities for their invitation, and their cooperation in organizing this Seminar on Hospital Administration in the beautiful city of Karachi.

We believe that this seminar will be of great benefit to all of us. We are sure that it will afford us an opportunity for exchanging ideas on modern administration of hospitals and that we will be able to achieve good results in our deliberations which ultimately will be beneficial contributions to our homelands.

Let me, once again, express our thanks and appreciation to all of you.



Dr. Ekrem Okyay of Ege University replies to the welcome address on behalf of the Government of Turkey.

OPENING STATEMENT

by

Mr. Arthur Hurst,

Delegate of the United Kingdom

I am very pleased indeed to be present here to take part in this Seminar on Hospital Administration and in particular I do appreciate your very warm welcome to this beautiful city. I think all delegates to this seminar are not only going to contribute but learn a very great deal about this important subject of hospital administration. Once again, may I thank you very much for your warm welcome.

OPENING STATEMENT

by

*Dr. William R. Merchant,
Country Coordinator,
U.S.A.*

On behalf of my country and my colleagues I wish to express our sincere pleasure at your invitation to join you in this CENTO Conference on Hospital Administration.

This conference is particularly relevant at this time. During my visits to your countries last summer it was of interest to note that we all share common problems. With the tremendous increase in our scientific knowledge we have a challenge to deliver the fruits of this knowledge to our people.

Money and trained personnel will be required to fully utilize our resources. In the United States medical care has become the third largest industry with an expenditure of \$70 billion. The cost has become a serious concern and more studies are needed to find more efficient ways to deliver health care in order to reduce these costs. More allied health personnel will have to be trained to assist the limited number of physicians. This is true not only of the medical staff of technicians but of administrative personnel who must operate the hospitals and the clinics. Professional time cannot be wasted.

This conference should be a valuable experience in sharing our knowledge and in our discussions of hospital administration.

CENTO REPORT OF THE SEMINAR ON THE TRAINING OF HOSPITAL ADMINISTRATORS AND REVIEW OF MODERN ADVANCES IN HOSPITAL ADMINISTRATION

INTRODUCTION

The Seminar on the Training of Hospital Administrators and Review of Modern Advances in Hospital Administration was held at the College of Nursing of the Jinnah Post Graduate Medical Centre in Karachi from 19 to 24 March 1973. Delegates from all member countries took part in the seminar.

The seminar was opened by Mr. Abdul Waheed Katpar, Minister of Health, Sind Province. Leaders of visiting delegations replied to the address of welcome.

PRESENTATION

Dr. W. R. Merchant opened the first working session of the seminar by presenting a background paper on the Role and Contributions of the Veterans Administration Medical Programme.

These points emerged from the discussion following the presentation of this paper:

- 1) The change from inpatient to outpatient treatment does not totally reduce the overall cost because of shorter length of hospitalization and more rapid turnover of patients. More patients are being treated and the cost per individual patient averages less.
- 2) In reply to a question as to how Veterans Administration costs compare with private hospital costs, it was explained that the Veterans Administration costs include the cost of the physician but in the private hospital this is separate. Veterans Administration costs overall are much less primarily because of salary expense. The Veterans Administration averages one and one-half employees per patient and private hospitals average over three employees per patient.
- 3) Physician assistants are used in special areas for special tasks within the hospital. They are also used to assist physicians in their private practice in selected localities. There are medical-legal problems which have limited their use in some states. They are accepted on a limited basis, and now nurses are training technicians to compete with the physician assistants.
- 4) On the subject of how locations of hospitals are chosen and what other factors are considered, it was explained that in the past hospitals were located where a need existed and also where a local legislator wanted one located. Today, in the case of Veterans Administration hospitals, these are placed in locations where there is a high veteran population and near medical schools to take advantage of latest treatment techniques. In addition, the resources of the community hospitals are considered. For example, the Veterans Administration would not build extensive X-ray cobalt therapy facilities if they were available in a community hospital. Sharing agreements are worked out and the Veterans Administration might provide a service to the community hospital.

- 5) It was asked why new hospitals are being built if less patients are occupying them. The reply was that the total beds in existing hospitals are being reduced and the new hospitals are being built where demographic studies show the need is. The beds are being utilized efficiently because of rapid turnover and short length of hospital stay.

Dr. S. Hasan presented a paper on the current status of hospital administration in Pakistan and the following points emerged from the discussion following this presentation:

- 1) There was comment on whether a hospital administrator should be a physician or a nonmedical trained administrator. Iran and the United States representatives favoured the trained nonmedical man and Turkey favoured an administratively trained man, either nonmedical or physician. The Turkish representative further pointed out that if the administrator were a physician, he should spend his full time on administration and not practice medicine.

Pakistan, however, favoured the physician as administrator. This appeared to be a requirement at this point in time.

- 2) There should be enough hospital administrators to meet the needs of the various hospitals and health care centres. These should be trained to deal with the level of complexity of the programme which they are expected to administer.
- 3) It was agreed that there should be professional schools for those who enter this administrative profession. There should also be a plan of post graduate training to keep the administrator abreast of developments.

Mrs. Painda Khan made a statement to the delegates concerning the training of nurses in Pakistan. This was augmented by a paper by Miss S. P. Moolchand on "Nursing Training and Effective Staff Assignment," which was circulated to the delegates. Mrs. Khan commented that she was disturbed by the lack of participation at the seminar of nursing superintendents and matrons and requested that these categories of personnel should be fully involved in discussions on planning and hospital administration.

In the discussion following her statement, Mrs. Khan was congratulated on presenting excellent and honest views on the realistic problems of nursing. Delegates noted that there was

certainly a shortage of nurses and there were difficulties in providing training for this profession. Salaries and social recognition had not been adequate to attract more people to this specialty. It was agreed that this service was vital to the operation of a good hospital and that practical nurses and aides should also be trained to assist the nurses in performing their professional functions.

The second session of the seminar opened with a presentation by Dr. E. Okyay giving a country situation report on Turkey.

Then followed a lively discussion concerning the relationship between bed occupancy, size of hospital and length of stay. Dr. Okyay proposed the following formula:

$$\left[\left(B - \frac{B}{20} \right) - \left(\sqrt{B - \frac{B}{20}} \right) \right] \times \frac{1}{B} = \%$$

B = No. of beds

and stated that he had been successful in raising occupancy rate to 80 percent and increasing the turnover of beds.

The occupancy and length of stay were related to the nature of the service. A common problem was identified in scheduling of operations by the surgeons which affected the turnover rate and bed occupancy. It was agreed that costs on a daily basis were increased by a rapid turnover, but that an increase in the percentage of bed occupancy resulted in a saving on the "hotel" cost of the operation. It was of interest that when nurses were placed in charge of admission, the occupancy rate became higher.

Mr. K. O'Brien presented a paper dealing with medical records, training of clerical personnel and medical audit.

In the discussion which followed, it was agreed that a 500-bed hospital was the ideal size. A hospital of this size permitted all medical specialities to be represented and provided an excellent span of control from the administration viewpoint.

A problem common to all countries was that of having physicians complete records. Ward secretaries were considered a valuable asset and saved many hours of professional time for physicians and nurses.

A question was raised as to how long a medical record should be preserved. United States delegates stated that they never destroyed records because of long-term care of the patient, possible need to transfer records to another hospital if the patient changed his residency and for medical-legal reasons. In addition the records might be valuable for clinical research.

Mention was made of a very popular new records system for physicians based on analysis of the patient's problem. However, it was felt that, from a realistic viewpoint, if there are only a small number of physicians, they cannot be expected to prepare elaborate medical records.

Some form of medical audit was considered essential in examining the operation of a hospital. It was noted that the Veterans Administration hospitals had their own audit system and were also judged by the Joint Commission on Accreditation of Hospitals (J.C.A.H.).

Copies of three papers were distributed to delegates for consideration. These were as follows:

- 1) "Role of the Hospital in Preventive Medicine"
by Dr. Hasan.
- 2) "Essential Services and Minimum Standards for Polyclinic, Subclinic or Hospital"
by Dr. S. H. Mahmud.
- 3) "Manpower Management in Razi Medical Centre"
by Dr. A. Zarrabi.

Time did not permit the formal presentation of these papers but there was the following discussion on them:

Paper 1) It was agreed that there was a gap between "curative medicine" and "preventive medicine" and that an example of this would be the use of the hospital for family planning. It was desirable that all agencies involved in health care should be integrated with one another. Delegates noted that in Iran the coordination in the hospital was good but that difficulties existed outside.

Paper 2) Delegates found it of considerable interest that Dr. Mahmud developed the bed section after the clinic referred to in his paper was well established. This enabled him to plan his beds for the essential needs of the clinic population. In addition, it was easier to keep doc-

tors in the clinic if they had a bed section. There was a discussion on accreditation procedures and the delegate of Iran stated that only 30 percent of the hospitals there would qualify. In the United States financial support of the hospital was based on the category of case delivered and hospitals were divided into three types. Because of the great need, it was not possible merely to close the third-rate hospital. In spite of the emphasis placed on accreditation by the J.C.A.H. there are still 1,000 hospitals in the United States without accreditation.

In reply to a question, Dr. Mahmud explained that the polyclinic had subclinics which would refer to it the more difficult and serious cases. The role of the village hakim in Pakistan was elaborated upon.

Paper 3) Delegates recognized that there had been a marked reduction of beds in mental hospitals due to new techniques and use of medication. There remained the problem of following up the patient if he lived a long distance from the hospital and this was further aggravated by the shortage of social workers. In order to cope with the lack of psychiatrists it was pointed out that a central examining building could be utilized to screen all new admissions and provide proper treatment. Bed occupancy was affected by distribution of patients and while one ward might be only half filled, other patients awaiting admission would not necessarily be compatible with this group.

The third session of the seminar opened with a paper by Mr. L. M. Frazier on work planning and control.

The discussion following this presentation centred around a systems approach to planning with an established routine and delegation of authority. Corrective action would have to take place when plans go wrong by changing plans or personnel. It was noted that others might influence planning and that the planner should utilize the specialists when necessary. It was agreed that communications were very important and that frequently lack of understanding produced problems. To help overcome this the people who execute the plan should be involved in the planning phase also.

Dr. Chohan presented a paper on the development of a staffing pattern for a hospital and special programmes.

In the discussion which followed, attention was focussed on whether there should be complete care in every hospital or whether care should be based on regionalization with distribution of patients according to their needs. The question of the workload and the number of beds required to support this load was considered. There were comments on the number of nurses needed and the number of available hours for the patient. It was pointed out that needs were established by diagnosis in a psychiatric hospital.

Dr. M. A. Nau Bahar gave a presentation on the education and training of middle management and afterwards in discussion it was pointed out that there was now a need for specialization. The seminar agreed that authority should go with knowledge and experience but underlined the need also for delegation of authority. In an active discussion on what made up middle management, various systems were described by representatives from Turkey and Iran. There seemed to be agreement that service chiefs should be included in this category.

Dr. Aram reported on the current situation in Iran in the field of hospital administration. He also described the establishment and implementation of the loan scheme in Iran.

In reply to questions, Dr. Aram stated that at present there were in Iran different classes of care but minimum requirements should be met. Private hospitals in Iran have an audit of laboratories and budget but fees are not controlled for "hotel" services. He agreed that a good hospital administrator could increase efficiency and earnings.

There were further questions on medical care in rural areas in Iran. Five hundred mobile units work in the villages. These units have laboratory and X-ray facilities with a staff of one doctor and six assistants.

Dr. Motameni then presented a paper by Dr. Ghaemian on the training of hospital administrators in the School of Public Health at Tehran University.

Discussion centred on the appropriate venue for a school of hospital administration and the group agreed that it could be in a school of business, medical school or school of public health. A problem often encountered was that the young graduates believed on graduation that they should be considered as top management. A system of middle management was required for further training and evaluation of the individual. It was agreed

that administrators, doctors and nurses would have to work as a team.

Dr. Motameni went on to describe another type of training programme underway in Iran whereby, following an intensive course, retired generals and colonels are assigned to hospital administration posts. This was felt by the delegates to be an excellent idea although they felt that the major problem would be lack of flexibility on the part of the trainees.

The final working session opened with a paper by Mr. P. Battisti on manpower management in a hospital setting.

Following this presentation, there was a most active discussion of horizontal versus vertical management. It was recognized that there were units such as renal dialysis which could operate on the team concept. However, it was felt this would be most difficult with large services such as nursing or dietetics where relief would be needed for illness. It was proposed that councils would control this problem. Physicians would relate to the patient and control the team. The representative from Iran stated that his country's experience of this method has proved disappointing.

Mr. J. F. Hoefer brought the session to a close with his presentation on planning and scheduling of maintenance.

There followed a discussion about interstitial space being built in new hospitals and thereby increasing flexibility to meet new demands. Because of high construction costs in the United States, prefabricated construction had been used successfully there with a saving of money.

In reply to questions, Mr. Hoefer stated that hospitals should have their own engineering service but that this could be contracted from another source. He pointed out that good maintenance required money and personnel but recognized that there was a serious shortage of technicians in the regional countries.

Mr. Hoefer described the new 100-bed mobile unit developed by the U.S. Army. He said that this would be an excellent way to meet medical emergencies such as epidemics.

It was noted that in the United States, engineers with various skills are hired and then trained in hospital work. Also it would be useful to send someone on a regular schedule through the hospital to make minor repairs. Good maintenance would pay for itself over the years by increasing the life of the hospital.

CONCLUSIONS

The delegates felt that the seminar had been useful and appreciated the opportunity to exchange views and add to their existing knowledge in the field of hospital administration.

It was felt by some delegates that perhaps a workshop setting would have been rather more appropriate for the discussion of some of the topics on the agenda. In addition, such a setting would have permitted consideration of these topics in greater detail. The problems encountered in special hospitals such as T.B. and psychiatric hospitals should be discussed in special workshops.

In future, consultants should be given guidance by the regional countries on their particular problems; thereby consultants might then be in a position to give the benefit of their experience on day-to-day matters. It was admitted that the advanced areas of interest covered in the seminar would be useful for the regional countries in drawing up their master plans and projections for future years.

On the subject of composition of delegations to the seminar, it was agreed that participating governments should in future consider this question carefully in relation to the subject matter of particular conferences.

RECOMMENDATIONS

The seminar framed the following recommendations:

- 1) In addition to formal academic and short-term training for hospital administrators and their staff, consideration should be given by the regional governments to short-term training facilities within the regional countries in management and administrative subjects for all grades of hospital staff at various levels.
- 2) Travelling workshops should be organized through CENTO auspices to deal with planning and organizational problems of specialized administrative departments within hospitals, e.g., medical records, laundry, maintenance, stores and food service.
- 3) Regional governments should be encouraged to arrange under CENTO auspices for the interchange of personnel between hospitals of the regional countries as a

learning process in good hospital practice in administration.

- 4) Towards a clearer understanding of administration and the role of the administrator in hospitals, lectures on these subjects should be included in the curriculum of medical, nursing and allied professional education.
- 5) Exchange of information and management studies should be encouraged in the regional countries in the field of hospital administration and CENTO should be approached for sponsorship if required. The results of these studies could usefully be screened by the regional country coordinators at this seminar and circulated for information and guidance.
- 6) With the development in the regional countries of hospital administration as a separate speciality, it is important that regional governments and authorities should recognize that responsibility cannot be taken without the necessary authority to carry out this responsibility.

Consideration of Report

The seminar report was considered by the delegates and adopted with certain amendments.

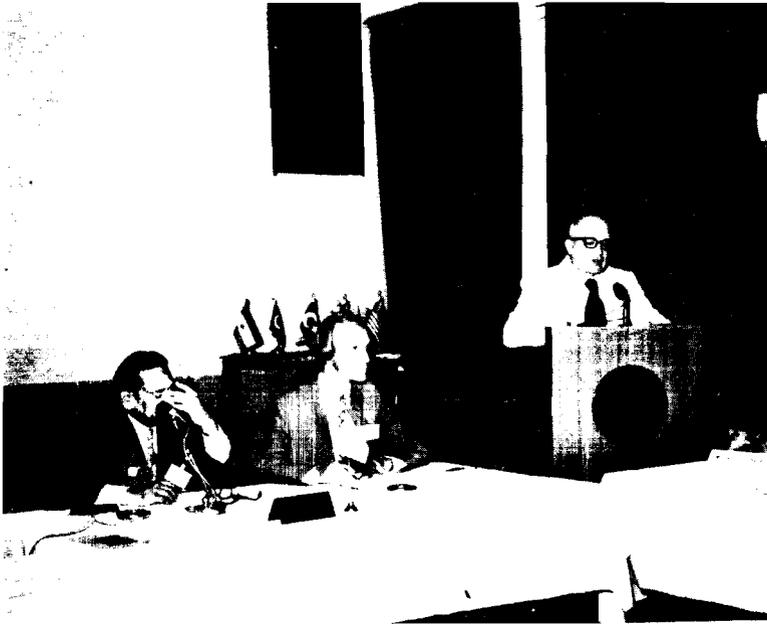
Acknowledgments

The leaders of visiting delegations expressed their gratitude to the Government of Pakistan for hosting the meeting and providing such excellent facilities and hospitality during their stay in Karachi.

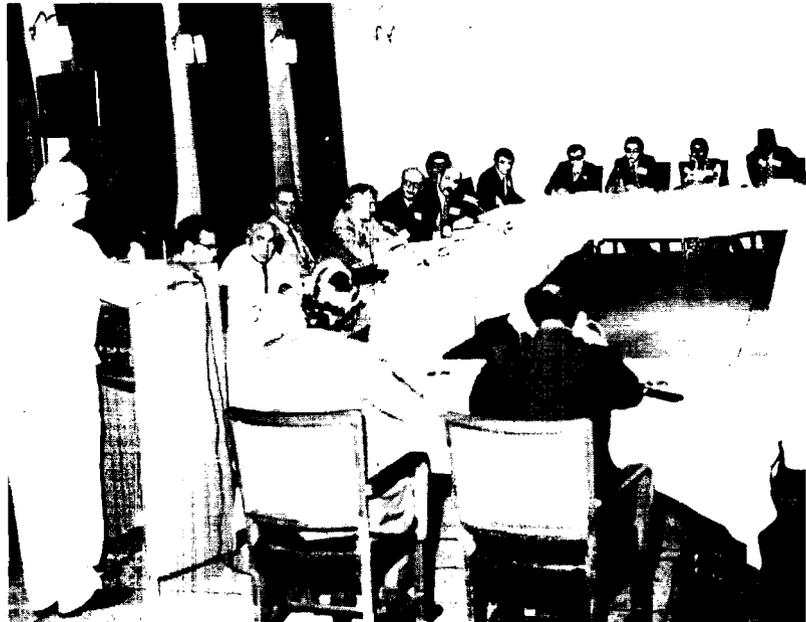
All delegations joined in thanking Dr. Merchant and the consultants for their efforts in preparing papers and for generally contributing to the success of the meeting. They also expressed their appreciation to CENTO for its sponsorship and to the Secretariat for its servicing of the seminar.

*Delegates enjoy dinner
given by the Government of Pakistan
at the Intercontinental Hotel
in Karachi.*





*Dr. William Merchant
delivers the
keynote address
at the
first working
session . . .*



*. . . while
delegates listen.*

PAPERS PRESENTED BY THE
DELEGATES

ROLE AND CONTRIBUTIONS OF THE VETERANS ADMINISTRATION MEDICAL PROGRAM

by

*Dr. William R. Merchant
Director,
Veterans Administration Hospital,
Madison, Wisconsin*

The Veterans Administration Hospital system is one of the largest single systems in the world. It comprises 168 hospitals with what was once a bed capacity of 110,000, now reduced to 80,000. The reduction of beds resulted from improved methods of treatment and increased outpatient visits.

After World War II and its large number of veterans, new plans had to be made for the care of their service-connected

wounds and illnesses and for those unable to pay for hospital care. Dr. Halley and Dr. Magnuson joined the Veterans Administration with goals of improving and maintaining excellent patient care.

This was achieved by building a large number of new hospitals adjacent to medical schools and establishing what became known as a Dean's Committee. This usually consisted of the Dean and Chairmen of the major departments such as medicine, surgery, etc. The Veterans Administration hospital was represented on this committee by the Director, Chief of Staff, Assistant Director and Associate Chief of Staff for Research and Education. This committee had to approve all professional appointments to the hospital. In return the hospital established teaching services for medical students, student nurses, residents, interns, psychology trainees, physical medicine--in all we are involved in 29 different allied health programs. The Dean's Committee became important, for the hospitals have become regarded as an important unit in the medical school's teaching plan.

For example, my hospital does one-third of the clinical teaching of third and fourth-year medical students. In addition we have 75 student nurses each day from the school of nursing, and many allied health personnel training in other services.

We have continued to build new hospitals adjacent to medical schools or the new medical school may be built on Veterans Administration property. Recently Congress passed a bill in which the VA will build eight new medical schools and assist others in their educational efforts. At the present time we are affiliated with 90 medical schools and numerous junior or technical colleges. Training is offered in 29 specialties.

There are at the present time 29 million veterans who may be provided medical care if they have wartime injuries or diseases or are unable to pay for medical care.

In order to attract physicians from a lucrative private practice we offered them not only a field academic appointment, but support for their research interests.

The research budget is \$75 million this coming fiscal year and is distributed to hospitals as an institutional grant, with peer review for the large expensive programs. We have considerable pride in the accomplishments of this program. The first aortic valve replacement, the cardiac pacemaker, renal transplant, control of hypertension, control of tuberculosis by drugs and many others were first done in the VA. Clinical investigator and research associate positions have been established to encourage young physicians in the field of research.

The budget this year for hospital support was \$2,700,000. This is divided among 168 hospitals in terms of the type and complexity of their programs. Fifty percent of our beds are psychiatric and we are noting, as others have, that our bed occupancy is declining and our outpatient load increasing.

The organizational structure of the hospital consists of a Director, Chief of Staff and Assistant Director. The latter has control of all the support services, e.g., supply, house-keeping, engineering, personnel, medical administration, etc. The Chief of Staff has all the medical care services, nursing, surgery, medical, etc. He is responsible for the quality of medical care and should be a man respected by his colleagues. We have been recognized for giving strong middle management support to the clinical services.

RECENT ADVANCES
IN HOSPITAL ADMINISTRATION
IN PAKISTAN

by

Dr. S. Hasan,

*M.B., B.S., D.P.H. (Eng.), D.T.M. @ H (Liverpool),
Deputy Director General, Health,
Government of Pakistan,
Ministry of Health and Social Welfare,
Health Division,
Islamabad*

While discussing the progress made in Pakistan in the field of hospital administration during the last 10 years I would consider it appropriate to refer to the report and recommendations of the CENTO Conference on Hospital Administration held in Tehran from April 28 to May 8, 1964 and to use it as a base to indicate how far we have gone ahead in implementing those recommendations.

The last Tehran conference stressed the need to have full-time administrators in hospital, to have hospital administrators trained in management, budgeting and finance, to organize post graduate courses on hospital administration in the country, and to create a representative governing body to look after the requirements of the hospital in the context of its aims and objectives.

Covering these points one by one, as far as full-time administrators are concerned, it might be pointed out that 10 years ago the Tehran conference recognized the fact that Pakistan had full-time administrators. We certainly had a full-time post for Director/Medical Superintendent in all major hospitals. But as a matter of fact we were able to place them for full-time administrative duties in only a few large hospitals. In others a physician or a surgeon used to be Medical Superintendent, and he combined this with professional work also. Now the position is that in all central government hospitals there are two full-time administrators, one principal and one deputy meant exclusively for administrative duties. These posts are being manned accordingly and are not lying vacant. In provincial government hospitals, also, including teaching hospitals down to the level of district hospitals, there are now full-time administrators on duty. Since we have not been able to train all these medical superintendents or administrators in the field of hospital administration either abroad or at home, some of these categories of persons may not have the requisite experience of the art, but we are in the process of getting them trained. Quite a number of fellowships are being obtained under various technical assistance programmes like the Colombo Plan, WHO,¹ and UNDP² for training these individuals in the U.K., U.S.A. and Australia in the field of hospital administration. Both long and short-term courses available in these countries are being taken advantage of. Apart from this the doctors holding such posts are placed for administrative training in the Administrative Staff College, Lahore, or the National Institute of Public Administration, Karachi, for the purpose of acquiring necessary training in management, budgeting and financial procedures and in the methods of public administration. National and international seminars have also been organized in this country in places like Karachi and Lahore on this important subject which has also been a major topic on the agenda of scientific discussions organized from time to time by various professional groups and associations.

The fact that we consider hospital administration as a distinct speciality can be evidenced from the qualification requirements for Medical Superintendent and Deputy Medical Superin-

1. World Health Organization.

2. United Nations Development Program.

tendent laid down by the Central Health Ministry. These state that preference will be given to a candidate who possesses a post graduate degree or diploma in hospital administration besides having administrative and professional experience.

We feel the need to start a post graduate course on hospital administration in our country and we are engaged in this. The CENTO authorities are already working on the feasibility of making this Jinnah Post Graduate Medical Centre, Karachi, a regional training institute for basic medical sciences. We would prefer that the study should also include consideration of starting master's degree courses on hospital administration in this Centre for the benefit of the CENTO countries. In this context I will read the recommendations of Pakistan's new Health Scheme which is on the verge of finalization:

"At present there is no arrangement for formal training in hospital administration in the country. The world today recognizes the importance of proper administration of hospitals if these are to function efficiently and economically. Unless scientific management is introduced in hospitals, full benefit of the expenditure incurred on facilities and provisions would not be available to the patients. Scientific hospital administration and management must therefore be introduced. It is proposed to start a formal academic programme in hospital administration leading to a master's degree at Karachi to begin with, where facilities can be readily established in collaboration with the faculty of the teaching hospitals and of the university."

As regards having a representative governing body for hospitals as suggested at the Tehran conference, it may be mentioned that the Jinnah Post Graduate Medical Centre, Karachi, has adopted a system of administrative machinery which involves a "General Council," an "Academic Council" and an "Administrative Council."

The composition of the *General Council* is as follows:

- 1) Director General, Health
- 2) Director, Jinnah Post Graduate Medical Centre
- 3) Chairman of the Academic Council
- 4) Coordinator Basic Medical Sciences Division.

Director General, Health, is the Chairman of the Council and the Director, Jinnah Post Graduate Medical Centre, is the Secretary with executive powers.

Functions:

The council acts as an advisory body to the Academic and Administrative Councils on matters of general policy, and Budget. Meetings are held twice a year at the discretion of the chairman.

When there is a difference of opinion in the Academic and Administrative Council, the matter is referred to the Director, Jinnah Post Graduate Medical Centre, to be placed before the General Council.

The Academic Council comprises professors of basic medical sciences and clinical departments. Only those professors who are heads of the respective departments are the members of the Academic Council. The Director, Jinnah Post Graduate Medical Centre, is an ex-officio member.

Functions:

The Academic Council is primarily involved with academic matters of all kinds concerning the Post Graduate Medical Centre and the Jinnah Central Hospital with its affiliated institutions. In general, these involve patient care, teaching and medical research. Administrative responsibilities rest with the Administrative Council, but liaison is very close to maintain the best possible working relationships between academic and administrative matters.

Responsibilities of the Academic Council include the following:

- 1) Planning of the post graduate training programme.
- 2) Supervision and organization of the post graduate teaching examinations.
- 3) Review of medical practice in the hospital and in the outpatient department through:
 - a) Record review
 - b) Autopsy review
 - c) Review of surgical tissues and
 - d) Clinical conference within the department and between departments.
- 4) Selection of candidates for speciality training.

- 5) Review of professional and ethical behaviour of professional staff.
- 6) Survey of hospital practice and procedure which relate to patient care and teaching. This includes:
 - a) Selection and availability of drugs
 - b) Standards in nursing care
 - c) Laboratory procedures
 - d) Emergency care at all hours
 - e) Record keeping and
 - f) Infections and cross infections, etc.
- 7) Organization, supervision and development of a medical research library.
- 8) Review of proposals for clinical research through a committee, or by a meeting of the full council.
- 9) Keeping the administration informed at all times of its requirements and bringing to the administration suggestions and advice on improvement of patient care and teaching through improved administrative procedures.

The Administrative Council comprises the administrative cell with the following officers:

- 1) Deputy Director
- 2) Administrative Officer
- 3) Accounts Officer
- 4) Principal, Post Graduate College of Nursing
- 5) Matron
- 6) Assistant Superintendent (Medical) and
- 7) Assistant Superintendent (General).

In addition to the above-mentioned officers, representatives from the following departments may be asked to attend where necessary:

- 1) Pakistan Public Works Department
- 2) Karachi Municipal Corporation
- 3) Karachi Development Authority and
- 4) Karachi Electric Supply Corporation.

The Director is the Chairman of the Council. The Chairman of the Academic Council also participates.

Functions:

It deals with purely administrative matters concerning establishment, stores, building and transport, etc.

The provincial government's teaching institutions have also made similar arrangements for administrative purposes.

Pakistan's new Health Scheme also envisages formation of advisory committees for hospitals and I quote the relevant recommendations:

"There is a feeling in the public that there are no recognized bodies which can represent the complaints difficulties of the public to the administrative authorities of hospitals and medical institutions. It is therefore recommended that advisory committees should be constituted for district and teaching hospitals including national institutions. This measure will help the public as well as the administration as these committees will act as a link between the public and the hospital authorities. They will on the one hand study and difficulties experienced by the public, render constructive advice to the hospital authorities and in addition appeal for funds, blood donations, etc., and render any other help that the administration may ask for. They will, however, not interfere in the day-to-day administration of the hospitals. The Advisory Committee should consist of the following:

- 1) One doctor from private practitioners*
- 2) One MPA or MNA of the area*
- 3-4) Two respectable citizens of the area.*

N.B. One of these four members shall be a lady."

Finally I may also mention a suggestion made at the Tehran conference that governments should make it possible for the public to obtain the necessary drugs and medical equipment needed for diagnosis and treatment of patients by stimulating the development of the local manufacture pharmaceuticals medical supply and equipment industries. In this context I should like to inform my friends and colleagues that our National Assembly has recently passed an act known as Drugs (Generic Names) Act 1972 which prohibits import of all but a few medicines and makes it compulsory for local manufacturers to manufacture all medicines under generic names. This has been done to lower the prices of the medicines required for the treatment of the sick and make them locally available. Similar patronage is being given to local industries in our new Health Scheme for the manufacture of medical and surgical equipment.

NURSING TRAINING AND EFFECTIVE STAFF ASSIGNMENT

by

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Karachi*

INTRODUCTION

Before I discuss nursing training and staff assignment, the subject I have been asked to speak on, I feel that proper understanding of the role of the modern nurse, her proper functions, duties and responsibilities is essential, and also her difficulties in fulfilling that role, difficulties which often remain unsolved and result in a great deal of frustration.

Nursing no doubt is as old as mankind, as the first man must have had a nurse to take care of him during illnesses, otherwise he would have perished. During the ancient days the nurse's training consisted of instructions about bathing, feeding, bedmaking and attending to the man's needs. Of course for doing such tasks mental forces were not very much involved, and

this kind of patient care was undertaken by the religious sisters without any training but through maternal instinct. Modern nursing came into existence during the time of Miss Florence Nightingale, who led a group of gentle ladies to minister to the sick and wounded during the Crimean War, over a hundred years ago.

Nearly everyone has vague and not always accurate ideas about nursing. A child, for example, may think it simply means making him feel better, or much worse, if a nurse happens to hurt him when giving a hypodermic injection or other treatment. To many adults it means good, bad or indifferent attention to their needs during illnesses, depending upon their associations and experiences with nurses and nursing. To one physician it may mean merely the bedside care his patients receive; to another it is an allied profession made up of personnel prepared to contribute a great deal in many ways to the health needs of our citizens.

Some people look upon nurses as just a pair of hands who are to carry out orders without questioning. The times have changed now and nurses are better prepared and more knowledgeable about the implications of medicines; e.g., take a case of diabetes. How could a nurse know whether to inject the patient with 70 units of insulin or omit the dose because the patient is not feeling quite himself? Or perhaps if he goes into a condition of hypoglycaemia, what is the immediate treatment? Remember, the doctor cannot always be present, and while the nurse is there at hand, she can only undertake to do such tasks if she is prepared for them.

Demands on the nursing practice are increasing with the increase in medical science, and the nurse is expected to undertake tasks which previously were done by doctors. Therefore, if more is expected from the nurse, her preparation is also undergoing change, the syllabus of nursing training is enhanced, and more emphasis is paid to basic scientific knowledge as well as bedside practical nursing.

Our society is changing rapidly. These changes have had their effect on our patients and on their expectations of our service. Since the creation of Pakistan 26 years ago, the patient has become accustomed to living in a welfare state. He expects a service geared to his needs and not those of former generations. Here comes the need for human relations and human psychology which is a component of our syllabus.

The introduction of modern methods of nursing with increased emphasis on basic care requires up-to-date nursing education to prepare the nurse for her functions. The nursing education programme should be aimed at teaching the nurse

how to protect, maintain and develop the patient's abilities to preserve his personal integrity and how to provide comprehensive care using all available resources including the cooperation of a patient's family. In this way the nurse contributes to the combined efforts to get the patient into a situation where he derives the greatest possible benefit from the medical treatment. Our knowledge of man and his conditions, our empirical inheritance as regards basic nursing, the results of medical and technical research increase rapidly and cannot, as earlier, be learnt in detail or put into practice in the form of nursing activities and procedures. Nursing of today requires scientific principles of work. The nurse is expected to apply these principles. The most important components of her function are analysis, planning, coordination, delegation, supervision and education. To carry out these duties she must be not only well versed and well informed in basic nursing care, medical care, supervision and teaching, but also capable of critical and constructive thinking and of making correct and quick decisions. She needs to be receptive to changes. She must be able to handle and master expensive and complicated technical aids. Her education should have in view the structural changes in the nurse's functions and its programme should be adjusted accordingly. Without attention to that aspect a nurse would be no good in an intensive care unit and unable to take charge of the monitoring of the cardiac patients which the modern nurse has to do.

SCHOOLS OF NURSING

With this brief description of a nurse and our expectations of her, I will now lead you to a School of Nursing, where this type of training is imparted.

Schools of nursing are attached to large hospitals, where clinical facilities in almost all the fields exist. In the absence of any particular field in one nursing school, nurses are deputed to another hospital to complete their clinical experience in the required field. Nurses training is a four-year programme, three years for general nursing and the fourth year for midwifery. Admission in almost all the schools occurs twice a year in accordance with the examinations, which are also conducted twice, in March and October. During the training period the nurse is enrolled as a student nurse. Requirements for admission are matriculation, first or second division with science subjects, the age limit is 16 to 30 years. For the first three months after enrollment, this young student nurse remains in the School of Nursing, called "Preliminary Training School." First of all she is given orientation classes on ethics and lectures on adjustment. Mind you, it is not easy to come to a boarding house after one has been a day scholar all her life. After a

week's orientation and visits to hospitals and other allied departments, lectures in subject matter are given.

Subject Taught

Subjects taught are English, Anatomy and Physiology, Nursing Arts, Ethics of Nursing, Personal-family-community Health, Microbiology, Introduction to Chemistry and Physics, Nutrition and Dietetics, Medical Nursing, Surgical Nursing, Materia Medica, History of Nursing, Communicable Diseases and Tropical Diseases, Pediatric Nursing, Orthopaedic Nursing, Technique and Teaching Health, Gynaecological Nursing, Genito Urinary Disease, Ward Administration, Personnel Management, Hygiene and Public Health, Human Relations, Psychology, Sociology, Psychiatric Nursing and Family Planning.

Practical demonstrations are first of all done in the school, such as bed bath, bedmaking, temperature, etc. A student poses as the patient while her colleague attends to her. Chase dolls are also used for this purpose. After the student nurse gets some idea about such procedures she is taken to the wards for an hour or two daily so that she learns to handle and attend really ill people. There is a vast difference between giving a bath to a Chase doll, and to a live patient.

All efforts are made to cover almost three-fourths of the first-year syllabus during this three-month period. At the end of this term, the student nurse takes an examination and on successful completion she is assigned regular duties in the wards, where she works under the constant supervision of the senior nurses, staff nurses and sisters. Sister tutors also arrange bedside clinics and further demonstrations in the wards. According to the classroom schedule the nurse comes to attend lectures. During the first year of her training she is not given independent charge of patient care. As far as possible she is assigned duties along with a senior nurse.

At the end of the first year, she takes another examination conducted by the Nursing Council. On completion she enters into the second year. During the second year more responsible types of jobs are entrusted to her, she is also assigned night duty after every three to four months, for a long stretch of one month at a time. Lectures continue. There is no Council examination during the second year, but an internal examination is conducted before she is promoted to the third year.

During the third year student nurses receive instructions in specialised nursing. At the end of the third year she appears for her final examination to qualify as a graduate nurse.

During her training the student nurse follows the classroom schedule and attends lectures one to two hours daily. The student nurse gets 15 days vacation each year, with no sick leave or any other leave. At the end of her training it is seen that she has two years and 10 months practical experience to her credit before she is admitted for examination.

Rotation Plan

A set rotation plan, different in each training institution, is followed in order to give clinical experience in each field of medicine and surgery and other specialised areas. To fulfill this need the student nurse is assigned to one field for at least three months before being moved to another area.

To impart nursing training of graduate standards in Pakistan there are 23 schools for general nurses training, 20 for midwifery and five public health schools. At these schools the total number of seats available is 1,363, and 250 to 300 graduate each year. These seats are not for yearly admissions but are for a three-year general nursing training course, and new admissions can only take place as the third-year nurses graduate. In my School of Nursing with 100 total seats, we admit about 40 students every year. This number is wholly inadequate for the growing needs of our country and should be increased manyfold. Let it be clear that there is no paucity of suitable and properly qualified matriculate girls coming to the School of Nursing for admission. On the average, five to six times the number admitted apply each year.

In recent years there has been little increase in the number of schools of nursing, though a few midwifery schools have been added during the last five years. Increases in the number of total seats in the schools of nursing have not been significant, compared to admissions to the medical colleges, where during the past decade admission in most medical colleges has been increased threefold. During the past two years four new medical colleges have been added and two more are in the offing. Therefore, not only have admissions to medical colleges been tripled but soon the number of medical colleges will be doubled. In fact, there is a greater need to increase the number of nurses in Pakistan than doctors. In our country there is one nurse to 30,000 people and one doctor to 7,000 people. These figures for the U.K. are one nurse to 300 people and one doctor to 700 people.

In the training of nurses, sister tutors play an important role and there is a provision of one sister tutor for 25 student nurses, which I submit is wholly inadequate. The pu-

pupil teacher ratio should be one sister tutor to 10 student nurses, though it is preferable to have a still better pupil/teacher ratio. I would like to point out here that the responsibility of a sister tutor does not end after the lecture has been delivered in the classroom and demonstrations completed in the laboratory. Nursing is not just a theoretical learning, and all that is taught in the classroom has to be mastered at the patient's bedside. The sister tutor is, therefore, required to follow the student nurse to the wards.

EFFECTIVE STAFF ASSIGNMENT

Whether one can make staff assignments effective, as this paper demands, is a matter of dispute. What I understand from the term is coverage of each unit and department in order to provide the best patient care, meeting his entire needs as well as providing supervision to the student nurses. To meet this requirement effectively a large number of qualified staff is needed, and this is a problem in our country. In one of our largest teaching hospitals, where wards comprise 50 to 70 patients, at present it is considered lucky that there is a sister and a staff nurse for each ward. But can these two people provide 24-hour nursing cover? Naturally, one section of the day is left without a qualified nurse, and the responsibility for patient care lies in the hands of a student nurse, who is not prepared for such a responsibility.

While making staff assignments a few factors are given considerations:

- 1) The interest of the sister or staff nurse in that particular field is given priority.
- 2) Her preparation for that responsibility is considered.
- 3) Health is also taken into consideration. For example, a sickly type of nurse cannot very conveniently bear the long standing hours as in O.T.
- 4) Her personality is also considered for some special types of work.

Under our present national government, great emphasis is being placed on the National Health Scheme. It is understood that more hospitals are being established, and it is a factual position that more and more student nurses will be admitted, but admitting more students for training will only improve the situation in the far future. The present need remains unaltered, and in fact, the shortage is further aggravated by the mass exodus

of trained nurses to foreign countries. Agreed, that the country earns foreign exchange in return, but what happens in the hospital wards in the country?

Thus, establishing a good number of training institutions and increasing the number of trainees can never be the answer to this problem, unless the number of personnel who are responsible for the training of student nurses is also enhanced.

The Pakistan Nursing Council, like the international councils, has established the criterion of one trained nurse to four patients (1:4) and for each three to five patients one student nurse is permitted. Thus for a 100-bed hospital, there should be 25 graduate nurses and 20 to 30 student nurses. I regret that this criterion is not met in any of our hospitals. This ratio of trained nurses is essential to the patients' proper care, and also for proper supervision of student nurses. Good nursing can only be taught by doing good nursing, and with a very great shortage of staff, the practice of good nursing is obviously difficult.

In one of the premier and the biggest hospitals in Pakistan with 1,200 beds there are only 77 sanctioned posts for qualified nurses, and not all of the 77 seats are occupied. At present there are only 55 nurses occupying these posts. With the entitlement of one month's earned leave, 25 days casual leave, a weekly day off, that leaves only three-fourths of the nurses on duty each day, i.e., about 40 graduate nurses for 1,200 patients. Out of this number at least 10 are engaged in administrative duties, 10 are on duty in the Operation Theatre, Labour Rooms and Casualty Department. Thus the total number available for bedside nursing is further cut down by 50 percent. Nurses have to cover 24 hours of the day, and therefore work eight-hour shifts. Hence in each shift there are only about 10 graduate nurses available for direct patient care, a ratio of 120 patients to each nurse. Can we expect to be satisfied with this ratio? It is obvious that the load of patient care is borne by the young shoulders of 110 student nurses, who are not prepared for such a responsibility.

Further, it may be mentioned that by the Nursing Council Standards this hospital could have double the number of students, but that without a significant increase in the number of trained nurses, this would leave the student nurses more unsupervised than now.

In considering staff assignments, another important aspect is the extra duties that our overburdened nurses have to shoulder. Because of the very small number of nurses that we have, any relief from non-nursing duties would increase their efficiency. Separation of cleaning department duties from the

duties of a nurse is an essential need, if the nurse is to attend to her bedside duties. Counting pills, powders and injections, a task that our nurses have to do every day, can better be done by a store keeper, who will be cheaper and release much of the time of the nurse for nursing duties.

In some cities of Pakistan an attempt has recently been made to introduce nurse aides. These inadequately trained persons may provide help to the nurses provided the scope of their work is carefully defined and they are suitably trained for their duties and they always work under the supervision of a nurse. But Alas! That has not been done and nurse aides wear a uniform similar to the graduate nurse, are confused with them and often work in their place. It is a pity that many private hospitals and nursing homes depend mostly on the unqualified and untrained nurse aides. This has therefore not helped to raise the standard of nursing and I fear that unless steps are taken to control the nurse aides they may overrun the profession as their numbers are increasing rapidly in an uncontrolled fashion. Many of these girls could be taken into the nursing profession and be an asset if they were encouraged to pass a matric examination and get admission to a school of nursing. It may be mentioned that the stipend of the student is about the same as the nurse aide is paid.

We have to go a long way to make full use of the role that the nurses can play in the modern welfare state that our country is. This nurse is not only to work in the hospital, but with a modern concept of health, the nurse can play an important part in the domicilliary practice of medicine and nurses can also be trained to work as health visitors (H.V.s). That scheme can only be implemented when we have many more nurses than we have at present. In 1964 when I had the privilege of participating in the CENTO Seminar on Nursing Education and Hospital Administration in Tehran, the basic documents listed the total number of nurses in Pakistan (West Pakistan) as 1869. That number has now risen to 5,500. That number must still be increased manyfold before satisfactory staff assignment is possible.

I may mention here that the increase in the number of nurses in the past 10 years is not fully available as we lose from the profession some nurses who get married and we also lose a large number due to the brain drain I have mentioned above. The position is further worsened as hospital beds are being increased all the time without an appropriate increase in the number of nurses. Thus bedside nursing care is not significantly improving though our nurses are better trained than before.

The nation needs more hospital beds, but adding hospital beds without sufficient nursing cover is not in the national in-

terest. A scheme of progressive medical care--intensive care, intermediate care, minimal care and convalescent home beds--may be in the national interest as we could provide progressive nursing care in all four types of wards.

Lahore has fortunately started a convalescent home attached to a medical college, which serves a useful purpose in saving nurses for more seriously ill patients.

DEVELOPMENT OF
EDUCATION AND TRAINING
ON HOSPITAL ADMINISTRATION
IN TURKEY FROM 1963 TO 1973

by

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In Turkey up to the end of 1962 nothing had been attempted in the way of organized training programs on hospital administration.

The authorities of the Health Ministry who had post graduate education abroad and experience in the National Health Service of England became so impressed by programs on hospital administration, that they gave their support and permission for the first school for teaching health administration to be established in 1963.

This school was to be run by the Ministry of Health and was designed to take 11th grade students for a period of four years (including one year of practical training), at the end of which they would receive a diploma. The first students graduated and received their diplomas in 1967.

Since that date 210 students have graduated from the school, of whom 75 percent have remained in the hospitals or the headquarters of the Health Ministry or related health institutions.

Due to personality changes, the school came under criticism, since the school had already produced 210 students for which we had 300 Ministry of Health hospitals.

During this time Hacettepe University in Ankara, through the President, became interested in establishing a post graduate program, and this was opened in 1969 to graduates and also diploma holders from the Ministry of Health School. This was a

Graduates from the Ministry of Health School became aware of the need to establish an association and this came into being in 1970. The objectives of this association were as follows:

- 1) Recognition of their training for military purposes to insure that when they were conscripted they were suitably employed in military hospitals. In this, they were so successful that they were subsequently commended for their efforts. Indeed, due to their influence the ultimate result has been that full-time medical directors of military hospitals will be required to complete an intensive management course in Ankara.
- 2) To establish students of good practice in hospital administration, by means of association discussion groups and recommendations to the Ministry of Health, through the interest of the Ministry of Health officials. Medical and nursing directors were encouraged to attend the association's discussions, and many became very interested and active participants.
- 3) Encouragement to graduates of the school to continue their education by entering for higher degree courses now available at Hacettepe University.
- 4) Recognition of the diploma as a qualification for posts in wider areas of health administration.
- 5) To submit recommendations for the improvement of assisting Ministry of Health laws and regulations or necessary new ones.

It should be recorded that much of this was due to the enthusiastic encouragement of the Director of the School of Health Administration.

To support the graduates in their fight for recognition, it was considered that doctors in their undergraduate training and students of the Higher Nursing School should be introduced to the problems of management and the role of the administrator.

It has been decided in addition to run a short intensive course in management for doctors and nurses in addition to seminars for existing hospital administrators.

Ege University, Izmir, fully conscious of this and also of the need to establish a department where research into hospital design, equipment and management could be carried out and advice could be given to outside authorities, decided to establish an Institute of Hospital Administration within the Faculty of Medicine, and this was approved by the Senate in 1971.

When the institute is fully developed with staff, accommodation and other facilities, it is hoped to establish a Master of Science Degree course in Hospital Administration.

In summary the current training facilities in Turkey consist of the following:

- 1) School of Health Administration of the Health Ministry for 11th grade students.
- 2) M.Sc. Degree course at Hacettepe University for graduates.
- 3) Lectures to medical and higher degree nursing students at the Institute of Hospital Administration, Faculty of Medicine, Ege University.

All are working towards a clearer understanding and better standard of hospital administration.

MEDICAL RECORDS

by

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The increasing importance of accurate and complete medical records on hospital patients and those who are treated on an outpatient basis becomes evident to all who are involved in health care today. "Let's look at the record," seems to be the standard comment when a question arises as to what was done for the patient, or what was not done for him, or how much it costs to provide care to the patient. Regardless of the type of health care provider, be it a voluntary nonprofit hospital, a private clinic, government hospital or one organized for profit venture, the medical record must be considered as a key element of patient care.

To help illustrate the need for accurate and complete medical records, consideration of those parties who have an interest in the medical record of the patient may be pertinent.

- 1) *The Patient.* Although the patient does not have access to his medical record, its content is of prime importance to him. What has been entered into his chart concerning his medical history, prior treatment, allergies, progress under care, medications administered and test results, are all of utmost importance to his well-being.

Similarly, failure to record many of these key elements can result in serious consequences to his health, even to his very existence.

- 2) *The Physician.* The physician cannot possibly plan for the care of the patient under his charge without complete and accurate information about his patient at his fingertips. Much of the information in the chart is generated by the physician in the form of the history and physical examination. The course of treatment and orders for tests, medications and special examinations are initiated by him. He is entitled to have quick and accurate response to his orders and above all, accurate results upon which to base his future decisions. These results must be in writing, properly authenticated and the physician must have assurance that they are correct.
- 3) *The Administration.* For lack of a better word, we will call those who are ultimately responsible for the overall operation of the hospital or clinic, "the administration." This body has a responsibility to insure that the hospital is providing quality care.

Patient safety, utilization of resources, quality and quantity of staff and condition of the structure and its equipment are all factors to be considered when determining quality of care. But at such time as the hospital is being surveyed by qualified individuals, an in-depth review of the medical records of the patients of the facility will provide a picture of what is really going on.

The administration needs information from the medical record for other purposes as well. Qualified medical record personnel extract from well maintained patient records the information required to be reported to control agencies. These may be data on communicable diseases, on deaths due to certain causes,

on deaths and injuries as a result of criminal offenses or other violations of the law.

In some instances the budget of the hospital is based upon the patient case workload it handles. Data from medical records can also give insight into under or overuse of laboratories, X-ray and other specialty services.

CONTENT OF THE MEDICAL RECORD

The most complete and comprehensive statements of what should be contained in the medical record, known to this writer, are the *Standards* published by the Joint Commission on Accreditation of Hospitals. These are the standards used by most United States hospitals seeking accreditation by the Joint Commission. These standards are clearly written and easily understood. For the purpose of this paper they will not be repeated but they are recommended for any health care facility to use as a guide in medical record preparation.

Medical records of patients should, as a minimum, include sufficient data to provide the following:

- a) Sufficient information to identify the patient.
- b) Identify when he was admitted to care.
- c) The important details of the patient's history which can have a bearing upon his care.
- d) What was done for him in the clinic or hospital in the way of tests, examinations, treatment, medications.
- e) Diagnosis and condition of the patient upon release.
- f) What disposition is made of the patient and

The experience of a large hospital system over a period of many years provides some suggestions to hospitals developing a program in the management of medical records. These suggestions are summarized below:

- a) Medical record entries should be made daily and completed promptly at patient's discharge.

Omissions and errors are more likely to occur with the passage of time.

- b) Data in the medical record can be in legible handwriting if typing is a problem.
- c) Medical records should remain confidential, accessible only to those caring for the patient or involved in his hospital processing.
- d) Medical records can and should be transferred to other hospitals and health care personnel who will assume responsibility for care of the patient if needed.
- e) A control procedure should be developed to indicate where the patient's record has been moved. This may consist of a locator card showing who has possession of the record at all times.
- f) It is recommended that a standard nomenclature of diseases be used so that all who use the record will be familiar with the terms used.
- g) No organization, however small, will handle medical records uniformly. It is recommended that within a given hospital or group of hospitals under single control, committees be established to review medical records on a random basis at least to insure that there is uniformity and compliance with the minimum standards.
- h) The patient's medical record should be maintained intact, not split into separate locations. Unless this is done the record will not provide a continuum of care and the chronology of events surrounding his hospitalization will be broken.
- i) Although medical records should be complete and adequate they should be concise. Short specific statements which get to the point are preferable to long, rambling dissertations.
- j) Each page of the medical record should contain the patient's name and number assigned to his case. This permits ready identification of a sheet of data which may inadvertently slip from the records.

- k) The hospital should establish a policy as to the frequency of entry of doctors' progress notes for both short-term and long-term patients.
- l) A policy should be established with regard to how soon completed patient records are to be sent to the record, files, following discharge.
- m) Special hospital policies should be established with regard to recording data on informed consent for surgical procedures, submission of operative reports within 48 hours of surgery, complete data on anesthesia, including post anesthetic visits, etc. Tissue reports should be complete and timely.

MEDICAL RECORDS PERSONNEL

Shortages in numbers of physicians, nurses and other highly trained health professionals make it imperative that methods be devised to relieve these staff members of all possible administrative chores in order that they may devote their energies to the skills they possess. We have found that many nurses in past years had become so involved in ward administrative work that it was difficult to have them relinquish these tasks and get back into direct patient care. It is possible through job engineering and agreement among the professional staff of a hospital to place the purely administrative aspects of ward operation in the hands of non-professionals and they do a good job.

A trained ward clerk can see that routine supplies are stocked, patient appointments are made for specific examinations and tests, and she can see that the patient keeps these appointments. The clerk can make some entries in the medical records for authentication by the physician. The person serving as the administrative assistant or secretary on the ward or in the clinic needs to have certain attributes which are essential in dealing with the sick. He or she must be patient and understanding with patients and have the ability to work with professionals. She must be emotionally mature and possess the necessary intelligence to learn ward routine. On-the-job training under good supervision will usually produce a capable ward administrative assistant. Attached to this paper are two job descriptions of the duties of a ward secretary and a clinic secretary.

CONCLUSIONS

Good medical records are an essential part of successful hospital operation and are indispensable from the standpoint of the patient, his physician and the administration of the hospital. There are certain essential parts of the medical record which must be covered in order to provide a chronological record of the care of the patient from the time of his admission to the date of his disposition from the hospital or outpatient care.

The method of preparing and maintaining medical records may vary from hospital to hospital but accuracy of information, conformance with hospital policies and control of these records are vital concerns which should not be compromised. It is possible to relieve professional personnel of many of the administrative nonmedical tasks they perform by delegating these functions to properly selected and trained clerical personnel.

JOB DESCRIPTION OF A WARD SECRETARY WORKING ON A 40-BED MEDICAL OR SURGICAL WARD

WARD SECRETARY

Principal Duties and Responsibilities

I am assigned as a Ward Secretary and am responsible for the administrative operation of a 40-bed medical or surgical ward during my tour of duty. This involves the following duties:

- 1) I perform all phases of administrative and clerical duties of ward operation which do not require the services of the professional staff. I prepare and maintain patients' current clinical records from the time of their admission until time of discharge. I interpret doctors' orders, prepare necessary forms, coordinate and schedule patients for appointments and, in general, carry out all doctors' orders except administering medication and those which are under direct patient care.

- 2) I act as receptionist for the ward. I make and receive numerous inquiries from patients, visitors, administrative personnel and members of the professional staff. I also receive numerous phone calls from professional and administrative personnel throughout the hospital. In order to handle these inquiries and contacts without unnecessary disturbance to the professional staff, I must have a thorough knowledge of the ward and hospital procedures and an adequate knowledge of the overall program.
- 3) I am required to be familiar with the appointment and work schedule of the professional staff on the wards. Many consultants and attending physicians, as well as regular staff physicians, must adhere to a strict time schedule, consequently, I must coordinate appointments which do not conflict with their schedules.
- 4) Since this is a teaching hospital and there is a constant turnover of physicians, I am responsible for guiding and explaining administrative procedures and regulations to them. In order to guide action toward a desired goal, I must handle these duties with tact and diplomacy since most new physicians are more concerned with patients' care than with administrative functions of a hospital ward. I assist in training new ward administration personnel and, as the need arises, assist in the various clinics and on other wards.
- 5) Other ward clerical duties are described in the following pages.

Ward Secretary's Duties in all VA Hospitals (Including Nursing Home Care Units)

Doctor's Orders, Medication/Treatment

- 1) Prepares forms for one-time medication/treatment
- 2) Prepares forms for continuing medication/treatment

Charting

- 3) Charting T.P.R.s
- 4) Charting blood pressures
- 5) Charting weights

- 6) Charting diabetic records
- 7) Charting intake/outputs

Patient Related Duties, Other

- 8) Processes forms for diet orders
- 9) Processes late meal requests
- 10) Processes consultation requests
- 11) Processes laboratory test requests
- 12) Processes X-ray requests
- 13) Processes other test/examination requests
- 14) Schedules patients for surgery
- 15) Schedules appointments
- 16) Prepares authorization forms for surgery/special treatment/tests
- 17) Processes prosthetic appliance requests
- 18) Processes blood transfusion requests
- 19) Initiates action to request records from other hospitals
- 20) Processes treatment/test requests to other hospitals
- 21) Processes orders for restriction of patients' funds
- 22) Processes notification of seriously ill patients
- 23) Processes orders for removal from seriously ill list
- 24) Prepares forms for aid and attendance requests
- 25) Processes canteen book requests
- 26) Processes release of patient information
- 27) Processes consultations on ward
- 28) Processes administrative services for patients (barbering, pt. funds, etc.)
- 29) Processes outpatient visits on ward
- 30) Prepares patient count form
- 31) Processes actions for suicide observation
- 32) Processes actions for removal from suicide observation

Miscellaneous Support

- 33) Prepares work order forms
- 34) Types time schedules

- 35) Types memoranda/letters
- 36) Processes telephone calls - incoming/outgoing
- 37) Runs essential errands
- 38) Maintains bulletin board
- 39) Maintains reference library
- 40) Processes ward mail
- 41) Acts as ward receptionist
- 42) Obtains office supplies and forms
- 43) Services pneumatic tubes
- 44) Assists in orientation of new physicians/nursing personnel to hospital and ward routine

Admission to Ward

- 45) Processes admission records (admission: interward transfer-in; return from LOA, trial visit, passes)
- 46) Assists in orientation of patients
- 47) Notifies physician/nurse of admission
- 48) Obtains previous records
- 49) Affixes allergy labels
- 50) Maintains ward roster

Disposition from Ward

- 51) Processes dispositions records (deaths, transfers out, including interward transfer-out; to LOA, trial visit, passes, etc.)
- 52) Prepares prescription forms
- 53) Annotates ward morning report

Maintenance of Time and Attendance Reports

- 54) Maintains time and attendance reports for nursing personnel if decentralized to the ward.

SUPERVISORY CONTROL OVER THE POSITION

I work under the immediate supervision of the staff physician and ward nurse for my daily assignments and under the

general supervision of the Chief, Ward Administration Section, from whom I receive all administrative instructions and training. For the most part, clerical duties and responsibility for the efficient operation of a 40-bed ward are accomplished under my own initiative. I am at liberty at any time to call on my supervisor for advice. I have available *Dorland's Illustrated Medical Dictionary*, *Webster's Dictionary*, *Standard Nomenclature of Diseases and Operations*, *Secretary Guidelines*, VA manuals on administrative procedures and correspondence and written instructions and outlines furnished by the Chief, Ward Administration Section. New procedures are discussed and problems resolved at scheduled group meetings conducted monthly by the Section Chief.

OTHER SIGNIFICANT FACTS

This position requires a person with tact, diplomacy and a great amount of common intelligence. There are many functions that require prompt and expeditious action involving the application of a variety or complexity of procedures and processes, many of which must have been committed to memory or learned through experience. Good judgement must be used in making clerical decisions that require choosing from among a very large number of procedural guides and substantive guides. The incumbent of this position must possess a well rounded knowledge of medical terminology and procedures. To insure complete overall performance of all administrative duties, a training period of at least six months, or more, on the job is required.

I will exhibit a helpful, friendly and constructive attitude in my relationships with patients, their families and the general public. I must demonstrate through my actions and my words that I am genuinely concerned with the welfare of the patients.

This position requires a qualified clerk-typist.

JOB DESCRIPTION OF A CLINIC SECRETARY WORKING IN A LARGE OUTPATIENT CLINIC

CLINIC SECRETARY

Principal Duties and Responsibilities

- 1) I am one of several clinic secretaries in the 3 North and 8E Clinics and am required to function in any one of the following seventeen clinics: Ophthalmology, Otolaryngology, Allergy, Dermatology, Genitourinary, Renal, Surgical, Neuro-surgical, Plastic Surgery, Orthopedic, General Medicine, Cardiology, Endocrinology, Hematology, Coronary, Gastro-intestinal, Tumor and research programs pertaining to the clinics. These clinics service both inpatients and outpatients. I do a complexity of secretarial, clerical and administrative duties for consultants, ward and staff physicians, residents and students. I perform all phases of administrative clerical duties of the clinics which do not require the services of the professional staff.

- 2) I am responsible for transcription (both in shorthand and from the Voicewriter) of medical dictation covering the medical and surgical fields as shown above. The material is difficult and technical in nature by reason of the many and varied medical terms used in the different clinics. Each clinic is conducted by a specialist and each has his individual way of dictating. I prepare all correspondence required by the staff of the clinics. This includes, in addition to keeping patients' records, correspondence to other physicians, hospitals, relatives and consultations; a large majority of nontechnical correspondence is prepared on my own initiative for the signature of the chiefs of the clinics and I must be thoroughly familiar with VA regulations, procedures and policies. I am responsible for the correct punctuation, spelling, grammar, etc., and transcribe all dictation in final form and give it to the doctors for signature. I am responsible for extracting material from clinical records for completion of SF 544, Statement of Patient's Treatment, for insurance companies.
- 3) I receive each patient and visitor referred to the clinics. I must have a thorough knowledge of clinic procedures to insure patients are scheduled for the proper clinic as more than one clinic is often in progress at the same time. I review the doctors' orders and complete laboratory and X-ray requests, and requests for prosthetic appliances and carry out doctors' orders. I schedule patients for surgery and X-ray. I maintain a log record to insure patients are scheduled to the proper clinic and that the number of patients recalled will not overload the clinics on any given date. I am responsible for issuing appointment cards to patients for future clinic visits and must work closely with ward secretaries and the Admission Office to coordinate appointments. I assume full responsibility for making appointments for the doctors. I maintain a close check of all cases in the PHC Program. I coordinate clinic activities so that the patients are available, charts and other pertinent data are at the doctors' fingertips to insure a fast moving clinic. I file all material in PHC files in proper sequence.
- 4) I receive, screen and distribute material through the pneumatic tube system.
- 5) I refer all legally blind patients to the proper authority who is responsible for the Visual Impairment Program.

- 6) I maintain a daily log record of all types of patients seen in the clinics and from this record I prepare weekly and monthly reports and send them to the various Chiefs of Service. These reports are used as justification of the Residency Program of this hospital.
- 7) I receive incoming phone calls and take messages. I make numerous phone contacts with other sections of the hospital to exchange information concerning the examination, treatment and follow-up care of patients, both inpatient and outpatient. At the direction of the physicians I make FTS and WATTS calls to patients to change appointment dates. I also place FTS and WATTS calls for physicians to other physicians and hospitals pertaining to patients. I make the necessary arrangements for conferences called by the chiefs of the clinics. This involves notifying all persons who are to attend, advising them of the time of the conference and the subject matter to be discussed. I make appointments and maintain a schedule of appointments for doctors, taking into consideration prior commitments made by the incumbent and the doctors in setting up appointments. Appointments are for patients, conferences, meetings and other activities.
- 8) I gather material for use of the Chiefs of the Services from the files, library, or other available sources, working independently after receiving general instructions regarding nature of material desired.
- 9) I must have knowledge of the basic requirements of the supplies needed in the clinics and order replacements when necessary. I prepare requests for repair of all equipment located in the clinics.
- 10) I must be aware of travel regulations as I will assist in making travel schedules and secure funds for physicians of the clinics.
- 11) As this is a teaching hospital, there is a constant turnover of physicians. I am responsible for guiding and explaining VA regulations and procedures and policies to them. In order to guide action toward a desired goal, I must handle this duty with tact and diplomacy, since most new physicians are more concerned with patient care than with the administrative functions. I am often required to relay messages or instructions to the residents since the chiefs of the clinics are here only part time.

- 12) I assist in training new personnel in the duties of clinic secretary.
- 13) I will perform any other duties as may be directed by the Assistant Chief, Ward Administration Section.

SUPERVISORY CONTROLS OVER THE POSITION

I work under the immediate supervision of the chiefs of the clinics mentioned, consultants and staff physicians, and under the general supervision of the Assistant Chief, Ward Administration Section. For the most part the efficient operation and management of the clinics is left to my own initiative. The finished product is seldom reviewed. In unusual instances and procedural changes, the advice and guidance of my supervisor is obtained. Guidelines are VA manuals, technical bulletins, regulations and written instructions and outlines furnished by my supervisor. I receive oral instructions at group Ward Administration meetings.

OTHER SIGNIFICANT FACTS

This position requires a person who can think quickly and act in an emergency. I must be able to maintain my composure, possess a positive attitude and display a cheerful manner. There are many and varied pressures involved in this position; consequently, I must have the ability to determine which function requires priority and not become upset when pressured to accomplish incidentals for individuals who feel that their work must come first. I must also have the ability to tactfully handle patients and their relatives who are normally quite upset and concerned and feel that their problems are paramount. I am a qualified clerk typist and must have a broad knowledge of medical terminology and procedures as so many types of clinics are involved.

ROLE OF THE HOSPITAL IN PREVENTIVE MEDICINE

by

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EVOLUTION OF THE CONCEPT OF A HOSPITAL

The word "hospital" originates from the Latin word "*hospes*" which means a guest and also a host. It has been used through centuries to mean charitable institutions for the housing and maintenance of the needy, infirm or the aged, or a place of rest, lodging and entertainment, or an institution for the care of deaf mutes, cripples and the insane. All these hospitals essentially used to be ecclesiastical or monastic institutions, rather than medical houses, concerned more with relief of the body and care than with cure.

It was in the early 18th century that there was a beginning of social awakening as a result of which a new type of hospital especially for the treatment of the sick was conceived and established and started functioning. It developed during the course of the next two centuries along with the advances in medical science, and became known essentially as an establishment intended for the treatment of diseases and injuries arising in a community. Increased knowledge and advancement in technology introduced specialities and recent times have multiplied them in number and narrowed their fields of activities.

The upsurge of preventive and social medicine and its practical application to entire populations in the great public health movement of recent times have had an impact on the role which a hospital is expected to play in the community. The growing realization of the thin line of demarcation between health and disease, of the relationship between social and material environment and the individual's mental and physical well-being, has broadened the scope of functions of the hospital. The hospital is now regarded as an integral part of a health organization, the function of which is to provide for the population's complete health care, both curative and preventive.

This is the view expressed by WHO experts on the organization of medical care.

SCOPE OF FUNCTIONS OF A HOSPITAL

Regarded in this light a hospital should serve the whole community and offer facilities for the promotion of health and prevention and treatment of all diseases. The phrase "medical care" has also undergone a complete change in concept. It is now visualized in its wider concept of preventive and curative services to be rendered to the individual, and has been defined as a programme of services provided to an individual and thereby to a community necessary to promote and maintain physical and mental health. This programme should therefore take into account physical, social and family environment with a view to preventing disease, restoring health, and alleviating disability.

Viewed in this context the functions of a hospital may be broadly categorized under the following four headings:

- 1) Restorative
- 2) Preventive
- 3) Educational and
- 4) Research.

I will restrict my statement to the functions related to the preventive aspect since the scope of my paper does not allow dwelling on others.

Function Related to Preventive Medicine

It is being admitted now that when social medicine is practised independently, separate from hospitals, the total health care of a community suffers from various gaps and the method proves costly. Consequently, in some countries, including mine, the attitude has completely changed and now an effort is being made to obtain more and more complete integration with hospitals.

The advantage of this programme is that the technical facilities and expertise of the hospital are made use of in the preventive activities and it becomes easier to maintain liaison and contact with the individuals. On the other hand, there are some who believe that if all preventive activities are allowed to be carried out in hospitals, the hospital facilities become so overburdened with the numerous demands made on it, that its traditional curative function suffers.

Apparently it seems true and may be true, but we believe that if the hospital is adequately staffed and a reasonable amount of domiciliary health care is developed, integrated preventive and curative services in a hospital should work very well in the following important public health activities:

1) *Case Detection.* All patients attending the hospital, whether for outpatient consultation or for treatment in the wards, can be systematically examined whatever be the diseases, and these systematic examinations can be extended to persons accompanying them. This preventive activity can be extended in a number of fields. Uterine cancer can be detected in early stages in obstetrical and gynaecological cases. Outpatient departments can play an important role in the detection of cardiovascular disorders, diabetes, venereal diseases, discovery of rickets, malnutrition, parasitic diseases, etc. in children. A search for syphilis can be made in blood donors and pregnant women. Visual defects and hearing disorders can be revealed early in the specialized outpatient departments; systematic fluoroscopy of all persons attending the hospital is routine practice in some countries and it gives very good results in the control of tuberculosis.

2) *Maternal and Child Health.* In many parts of the world preventive and curative activities in this field have already

been integrated to a large extent in the outpatient department, but apart from this, social paediatrics and child welfare work can also be organized in the hospital's paediatrics outpatient department with which preschool and school health teams can work in close cooperation.

3) *Control of Communicable Diseases.* While routine immunization against endemic diseases should form a part of the function of the maternal and child health unit, the general outpatient department can provide cover to contacts with each case detection.

4) *Health Education.* Hospitals can provide a convenient opportunity in their wards and outpatient departments for health education because the patients and their families are receptive to the advice of doctors and nurses. In hospitals where an efficient appointment system is not practicable, as in our country, much time is spent in waiting for an interview with the doctor in outpatient departments. These are anxious periods of waiting which could be put to good use by simple educational schemes using audiovisual aids. The medico-social worker and the nurses in the outpatient department can be made responsible for this. The medico-social worker can give useful advice and information covering physical, emotional, and social aspects of illnesses by initiating enquiries during this period in the OPD.

It must, however, be emphasized here that the function of imparting health education should not be restricted to a particular kind of hospital employee. Every hospital employee should consider himself as a part of the team working to guide and help people to attain freedom from disease or infirmity.

These methods of course have limitations because doctors and nurses are very busy otherwise, but still they are useful. The best results are achieved through close contacts of the doctors and nurses, social workers, and lady health visitors of the hospital with patients in their homes, if a domiciliary care service has been organized by the hospital.

5) *Nutrition Education.* Every hospital should have a qualified dietician and this is now considered to be an essential requirement. This dietician should extend his guidance in principles of nutrition to the patient's family through one of the visiting dieticians working under him.

6) *Mental Health Service.* A hospital may organize a mental health service for the purpose of early detection and treat-

ment of psychiatric cases when treatment does not involve institutional care, and also for the secondary prevention of mental illness by arranging medical surveillance of cases discharged from special institutions such as mental asylums. It should also devote special attention to the investigation and treatment of various neurotic disturbances in which early treatment may prevent more serious psychiatric or psychosomatic illness.

7) *Aftercare and Medical Rehabilitation.* Medical rehabilitation contributes to the achievement of health in two ways: 1) It prevents the development of unnecessary disability which might occur during the course of illness, 2) in those affiliated with conditions causing unavoidable disability, it helps to achieve the fullest physical, mental, social and vocational usefulness. The dignity and the right to security of the disabled person is no less than that of a normal individual and everything possible must be done to rehabilitate him to a normal life in the society in which he lives. According to first Experts Committee Report of WHO on Medical Rehabilitation, medical rehabilitation is considered as the fourth component of the total scheme of health care, after health promotion, prevention of disease and treatment of the diseased person.

In countries where rehabilitation schemes have reached an advanced stage they have proved to be of social and economic importance through the reduction of the total period of invalidism, saving the cost of institutional care, sickness benefits, disability pension and productive employment. In countries at an early stage of economic and industrial development like ours where there is an unemployment problem, these considerations may appear to have less force. But such countries are largely dependent on a family system of agricultural economy where rehabilitation turns a useless consumer into a useful producer.

Aftercare and medical rehabilitation may be given to the patient on discharge from the hospital when he is ambulatory or when he still needs domiciliary care. If he is ambulatory such aftercare and medical rehabilitation may be given in the outpatient department of the parent hospital in which he received the first treatment. This has the advantage of maintaining in the same hospital continuity of treatment, and avoids chances of interruption of care which otherwise might result if the patient is referred to some other special institution meant for the purpose.

8) *Family Planning.* The access of eligible women to hospital maternity services and the interest in family planning in the post partum period make the hospital an eminently suitable setting for starting birth control. These advantages have been recognized in a number of countries such as Iran, India, Yugo-

slavia, and Denmark. Pakistan has also been experimenting on this for the last few years with good results.

9) *Epidemiological Study*. Every hospital, big or small should develop an efficient statistical unit. Based on the records in this unit an epidemiological study of the diseases present in the population served by the institution can be made and the needed health facilities provided from time to time. One way of helping to bring this about is by appointing the health officer to the staff of the hospital, thus giving him the opportunity of carrying out epidemiological work within the hospital and bringing him in closer professional contact with his clinical colleagues. In large hospitals a department of preventive medicine should be established with a public health specialist and supporting staff under him for epidemiological studies.

Considering that health care is a unit in which promotion of health, prevention, diagnosis and cure of disease and rehabilitation of patients are integral parts, the above public health activities should be the minimum ones to be carried out by hospitals. The bulk of preventive and curative work should be decentralized and provided by health centres for subcentres situated in the periphery, where all routine preventive work, including a sanitation programme, could be done, and the facilities for simple curative service would be available. In such a scheme, the hospital would provide supervision and establish public health principles. In those parts of world where health care services are at present being organized or reorganized (as is being done in Pakistan), the hospital may become the centre through which comprehensive integrated preventive and curative services could be provided; whereas in those countries where the health services are already well developed the aim should be the closest possible coordination of preventive and curative services.

REFERENCES

WHO Expert Committee reports on:

1. Medical Rehabilitation (First Report).
2. Role of Hospital in Programmes of Community Health Problems (First Report).
3. Role of Hospital in Ambulatory and Domiciliary Medical Care (Second Report).

Report of WHO Scientific Group:

4. Health Aspects of Training Nursing, 1970.

ESSENTIAL SERVICES AND
MINIMUM STANDARDS
FOR POLYCLINIC,
SUBCLINIC OR HOSPITAL

by

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Before discussing the essential services and minimum standards for a polyclinic, a subclinic or a hospital it is considered desirable to define what we really understand by the usage of these terms. At present there are no universally accepted definitions for these institutions. In certain places a polyclinic is taken as a group of clinics in various medical specialities giving only outpatient care, whereas in certain other places a polyclinic is required to provide outpatient care with a limited number of beds for emergency and observation. In some places polyclinic and hospital are synonymous terms, whereas in certain countries it denotes a hospital complex with sophisticated specialities. It appears, therefore, that the major task is to define what we really understand by the term polyclinic.

POLYCLINIC

Let us go through the stage of development of a polyclinic in Pakistan. (See Appendixes I and II) This polyclinic, located in Islamabad, was originally conceived as a health centre to provide comprehensive health care without hospitalization facilities to the residents of Islamabad. It has gone through various stages and is now providing the following facilities:

- 1) Outpatient care in internal medicine, general surgery, gynaecology, paediatrics, dental diseases, eye, ear, nose and throat diseases
- 2) Accident and emergency services
- 3) Maternity services
- 4) An immunization programme for tuberculosis, smallpox, cholera, and poliomyelitis
- 5) Inpatient care with an intensive care unit, a premature baby unit and a rehydration room
- 6) Family planning services
- 7) Diagnostic and supporting services including physiotherapy, and
- 8) A record and filing system.

This polyclinic is likely to add physical medicine, psychiatry, radiotherapy and beds in the near future. Through the stages of evolution of the Islamabad Polyclinic, and keeping in view the scope and functions of certain other clinics in the world, one is tempted to define a polyclinic as a hospital providing indoor and outdoor medical care facilities in basic medicine as well as in certain narrow specialities of medicine. Perhaps this is stretching it a bit too much. I would like to define a polyclinic as a clinic which should mainly provide outpatient facilities in practically all the basic specialities of medicine, maternal and child health services, an immunization programme, a limited number of beds to be used exclusively for emergencies and observation and some beds for confinement. The essential services and minimum standards on the basis of the above definition will include:

- 1) An efficient accident and emergency unit: a unit where traumatic surgery, surgery for acute emergencies including the emergencies of obstetrics and gynaecology and ear, nose and throat diseases can be

carried out. Such services will require proper resuscitation and operative facilities and an excellent ambulance service.

- 2) Outpatient care in internal medicine, general surgery, gynaecology, paediatrics, ophthalmology, otorhinolaryngology.
- 3) Maternity and child health services including beds for confinement. This will include the following services:
 - a) Antenatal care, consisting of:
 - i) full examination by physician, if possible, at least once during pregnancy and regular supervision
 - ii) dental care
 - iii) provision for emergency hospital admission, if required
 - iv) facilities for simple laboratory tests, i.e., urine analysis, haemoglobin determination, provision for taking specimens and for sending them to the main laboratory for blood testing if indicated, etc.
 - b) Confinement, to be carried mainly for emergency and complicated cases. Provision should be made for transportation to the clinic.
 - c) Aftercare for the mother, which should include postnatal examination by the doctor.
 - d) Infant care, with an examination by the doctor at the first clinic attendance, if possible, and follow-up examinations made at regular intervals. Facilities should be provided for immunization against communicable diseases, and for educating the mother in home hygiene and nutrition, with special emphasis on the weaning period. Provision for the care of premature infants should also be arranged.
 - e) Preschool child care, with follow-up care to be carried out at the clinic. Special provision should be made for nutrition, dental health, mental health and education in accident prevention.

- f) Health education, educating families in healthy living through health education.
- 4) A limited number of beds for emergencies and observation until the patients are shifted to proper hospitals.
- 5) Family planning services to be provided according to the national objectives and policies. By and large the family planning activities will fall under the following headings:
- a) Birth control through education and guidance on timing, spacing and the number of children considered to be adequate for a family through the provision of birth control care
 - b) Care for infertility
 - c) Education for parenthood
 - d) Education about sexuality and
 - e) Other activities, which will be directed to promote general health. These will include screening for pathological conditions related to the reproductive system and follow-up, genetic counselling, premarital consultation and examination, pregnancy tests, marriage counselling, the preparation of couples for the arrival of their first child, teaching home economics and nutrition activities and providing adoption services.
- 6) Maintenance of records is required:
- a) To assist the administration for effective management
 - b) For short-term and long-term planning of the clinic
 - c) For assessing whether the clinic is accomplishing its objectives
 - d) For the study in depth of particular problems of health and disease and
 - e) To provide background data that may be required from time to time by the administration.

Data should be maintained on:

1) Resources and their utilization:

a) Resources:

Buildings, equipment and facilities
Manpower
Finance

b) Utilization of resources:

Curative--outpatient and inpatient data
Preventive--i.e., immunization and screening statistics

2) Statistics of supporting services:

- a) Diagnostic--i.e., laboratory, X-ray
- b) Therapeutic--i.e., pharmaceutical
- c) Ancilliary

3) Statistics relating to special population groups:

- a) Family planning activities
- b) Maternal and child health services:
 - i) antenatal services
 - ii) confinement and infant health services
 - iii) postnatal services for mothers and infants
 - iv) special services for children

4) Statistics for the workers for occupational diseases.

SUBCLINIC

The subclinic, in the light of what has been said earlier about the polyclinic, should provide the basic health services, especially in view of the broadened concept of modern medicine and the trend towards establishment of integrated health services. It may be worthwhile to take into account the domiciliary health services in such units, which will be a step towards bringing the preventive and health promotion measures into the house and will reduce the burden of the community for development of hospitals.

The subclinic should include the following facilities:

- 1) Maternal and child health services
- 2) Communicable disease control
- 3) Health education
- 4) Family planning
- 5) Public health nursing
- 6) Medical care and
- 7) Maintenance of records for statistical purposes.

It may be observed that the conventional dispensary forms only a part of the service and is correctly relegated to the lowest order.

The Basic Services of a Subclinic

The basic services as discussed in detail in the Second Report of the Expert Committee on Public Health Administration of the World Health Organization are summarized below:

- 1) *Maternal and Child Health Services.*
- 2) *Communicable Disease Control.* The degree of emphasis depends upon the extent of local problems. The subclinic is required to assist and arrange all measures which may be adopted to prevent communicable diseases. Specific protection not only encompasses appropriate immunization against certain diseases but also measures directed at environmental control.
- 3) *Health Education.* Health education is an accepted activity useful in developing mutual understanding between the public and health agencies. This is best imparted by the staff of the subclinic who are known and trusted by the people.
- 4) *Public Health Nursing.* This embraces all aspects of nursing care carried out in connection with the basic services of a subclinic and is therefore very essential. This service includes home nursing and the teaching of simple home care, services in subclinics for pregnant mothers and their children, services for the prevention and control of communicable diseases, school health service including physical examination and home visiting. Generally it is considered feasible to ensure that such a service is available all the time.

- 5) *Medical Care.* In the less developed areas where health services are now being planned it is recommended that both medical care and prevention should be integrated. The public interest could be aroused more readily if the medical care is combined with preventive work. The pill of preventive medicine must be covered with a sugar coating of medical care. It would be best to state that preventive and curative medicines should go hand in hand. The subclinic should include a dispensary with a small laboratory for the use of ambulatory patients. It is necessary to provide hospitalization for the emergency cases, a maternity ward, prenatal and postnatal care and an ambulance service. The subclinic will, however, depend on specialized coverage from the technical centres in the fields of both preventive and curative medicine.

HOSPITALS

Now a few words about hospitals. The principal task of a hospital has been the care of the sick, though the degree of care has changed with the change of concepts and development in medical science and technology. At present there is a strong tendency to expand the scope of the hospital from the conventional outpatient and inpatient care by adding preventive services. The task of the hospital can be defined to link together all aspects of the healing arts and to prevent disease. To this may be added that the hospital is also a centre for the training of health workers and for bio-social research. The essential services and minimum standards vary with the type of the hospital. However, the important service to be provided by a hospital is proper inpatient care besides outpatient and diagnostic and supporting services. The essential services with minimum standards required for hospitals appear in Appendixes III to VI. These standards were prepared for the hospitals and health institutions as envisaged in the People's Health Scheme. The salient features of health reforms appear in Appendix VII.

APPENDIX I

CENTRAL GOVERNMENT POLYCLINIC, ISLAMABAD

INTRODUCTION

In 1963 a scheme for the establishment of a Health Station/Medical Aid Unit at Islamabad (since redesignated as the Central Government Polyclinic) at an estimated cost of Rs. 2.376 million was submitted to the government for approval. The government, however, approved the scheme at a reduced cost of Rs. 1.1 million for the reason that patients could be taken to the Central Government Hospital, Rawalpindi. The modified scheme was implemented at a cost of Rs. 1.234 million providing a ward block of eight beds, a central treatment area, an outpatient department, a laboratory, etc., equipment for the services and was commissioned in February 1966. In view of the decision involving a change of the location of the Islamabad Hospital and the subsequent delay in its completion, it was decided to allow a further extension of the polyclinic (called the first extension) at a cost of Rs. 1.186 million. This included the chief health officer's block, a civil surgeon's block, a services block and a ward block of 24 beds. Later, in December 1968, it was felt that the facilities at the polyclinic should be further expanded and the number of indoor patients raised so as to enable it to cater

to the emergent requirements of the rapidly increasing number of central government servants stationed at Islamabad. These mainly comprised a second story on the ward block to provide 24 additional beds (called the second extension) in the polyclinic for indoor treatment. The wards were commissioned on 19 March 1971.

MAIN OBJECTIVES

The Central Government Polyclinic was commissioned to provide mainly outdoor treatment facilities to central government servants and their families. From 19 March 1971, when the wards were commissioned, raising the bed strength from eight to 56, indoor facilities were also started on a regular but limited basis. During the year 1971-72 some effort was made to make this unit a reasonably self-contained unit and now it has started functioning as a small hospital providing the following facilities:

Outpatient Facilities

- 1) Internal medicine
- 2) General surgery
- 3) Obstetrics and gynaecology
- 4) Paediatrics
- 5) Ophthalmology
- 6) Dentistry
- 7) Otorhinolaryngology
- 8) Accident and emergency services
- 9) Family planning service
- 10) Immunization facilities
- 11) School health services
- 12) Maintenance of records

Inpatient Facilities

- 1) Internal medicine
- 2) General surgery
- 3) Obstetrics and gynaecology
- 4) Paediatrics:
 - a) General medicine
 - b) Premature baby unit
 - c) Rehydration unit
- 5) Ophthalmology
- 6) Intensive therapy with cardiac monitoring, pressurized breathing facilities, etc.

Attached Institutions

The following subhealth centres, dispensaries and MCH centres are attached to this clinic to provide adequate facilities for the central government servants living in other areas of Islamabad so that they can get medical advice close to their residences:

Subhealth Centres

Subhealth Centre G-6
Subhealth Centre G-7

Dispensaries

Dispensary at Pakistan Secretariat Building
Dispensary in Sector F-6/1
Dispensary in Sector G-7/2
Dispensary in residential colony of National Health Laboratories

MCH Centres

MCH Centre in G-7/2

School Health Clinics

School Health Clinic No. 1
School Health Clinic No. 2

Patient Statistics

On an average 2,400 patients attend this clinic and its attached institutions; out of these about 900 patients attend the polyclinic every day. The bed occupancy is 90 percent and about 120 deliveries are conducted in this clinic every month. Treatment is given free to all the central government servants and their families and all the drugs and medicines are also supplied from this institution.

Staff

The total number of staff members of the polyclinic and its attached institutions is 325. Out of these one is an administrator, and there are nine specialists and 32 medical officers. The nursing staff consists of three sisters and 20 staff nurses. The rest includes the ministerial staff, paramedical and ancillary staff.

Improvements Made From July 1971 to June 1972

- 1) Four beds for intensive care with cardiac monitoring and pressurized breathing and all other appliances.
- 2) Extension of the clinical laboratory and the commissioning of a blood bank.
- 3) A new room for the Medical Officer in the officer's outpatient unit.
- 4) Installation of a 17.5 KVA Standby generator.
- 5) A premature baby unit with four incubators.
- 6) A rehydration room with four cots for children.
- 7) Expansion of the physiotherapy unit by providing an additional room with four treatment cubicles.
- 8) A new operation theatre to complete a twin theatre suite.
- 9) Piped oxygen for theatre, labour room, casualty, premature baby unit and four beds in the officers' ward.
- 10) Equipment for all units to make the units self-contained.
- 11) Improvement of existing water supply.
- 12) Providing call bell system to all patients.
- 13) Installation of a 5+25 telephone exchange (P.A.B.X).
- 14) A central sterilization room for sterilizing equipment/packs, etc. for units other than the operation theatre.
- 15) Commissioning of a proper nursing hostel.
- 16) Creation of a resuscitation room with modern resuscitation facilities in the casualty department for dire emergencies.
- 17) Extension and reorganization of medical stores with an air conditioning facility in stores for preservation of certain important drugs which could deteriorate without such a facility.

- 18) Establishment of a suitable conference room with proper table and seating arrangements.
- 19) Installation of more water coolers in the general ward, casualty and outpatient department.

Future Plans

The following extensions and new construction have been approved by the government and Rs. 500,000 are allocated by the government for the development programme for the year 1972-1973.

- 1) Construction of a double story ward block consisting of 74 beds, an operation theatre suite and a casualty department. It is expected that the construction of this block will be started soon and 38 beds and the casualty department will be completed in about a year's time in the first phase.
- 2) One lift for the wards.
- 3) Extension of the stores block.
- 4) Extension of the female outpatient unit and left out spaces.
- 5) Construction of an underground water tank.
- 6) Provision of radiotherapy treatment facilities.

APPENDIX II

REPORT ON HEALTH STATION
(SUBCLINIC - HOSPITAL AID UNIT)
SECTOR G-6, ISLAMABAD

Prepared by

*Gerard Brigden,
Dip. Arch. (Poly), ERIBA,
and Derek Bradford*

As this first major health station in Islamabad is likely to be the forerunner of other similar projects, both in Islamabad and elsewhere in the country, the following brief report has been prepared in order to indicate the thinking that has engendered this particular solution to the problem, and to describe briefly the solution itself.

We consider that the true value of a report such as this depends upon a reassessment of the assumptions and conclusions after the building has been in operation for a period of time.

We hope to be able to make a first reassessment after the building has been in occupation for approximately one year. It would be useful if further assessments could be made after the third and fifth years of occupation.

THE PLANNING PROBLEMS

The problems encountered in planning a building of this nature fall broadly within the categories of:

- 1) Financial limitations
- 2) Function
- 3) Construction
- 4) Climatic conditions
- 5) Architectural character and
- 6) Future expansion.

Each of these categories is discussed in the following paragraphs.

Financial Limitations

In a developing country such as Pakistan there are inevitably strict financial limitations on all development projects. However, in buildings such as this, the recurring running and maintenance costs must be taken into account as they can be a drain on the economy and limit the funds available for further development. It is false economy to limit the construction costs to such an extent that low standards of construction and finish, which involve heavy maintenance costs, are forced upon the architect.

In order to provide a guide for future buildings of this kind a cost analysis will be prepared at the completion of the project giving details of the cost of the various elements of the building such as foundations, walls, roofs, windows, floor finishes, etc. Together with the reassessment of the building in use, the cost analysis can be used as a basis for setting future standards.

Functions

The efficient functioning of a machine depends upon the various parts of the correct size being positioned in the right relationship to one another. Similar factors are relevant to the functioning of a building.

It is important that the building should be planned so that it can function with the maximum possible efficiency and economy.

The three guiding principles in planning a medical building are:

- 1) The correct relationship of the various departments and of the areas within the departments in order to assist the medical process.
- 2) The maintenance of minimum distances between related departments in order to reduce distances travelled by medical staff.
- 3) The segregation of unrelated departments in order to keep unwanted traffic, noise and disturbance to a minimum.

Construction

The form of construction adopted has a direct relationship to the cost of the project. If the structure is such that simple load bearing construction using local materials can be used, an economical building will result. It is false economy, however, to use cheap, nondurable finishes. The building will be subject to hard usage. In the interests of hygiene, and to keep maintenance and running costs to a minimum, hard-wearing and impervious finishes must be used.

Climatic Conditions

The climatic conditions in Islamabad range from the extremes of hot summers (with temperatures reaching 115°F in the shade), and cold winters (with temperatures falling to 32°F). The major source of heat gain in the summer is through the roof structure. The traditional method of dealing with this problem, by building high rooms and applying mud insulation, is costly in construction and results in uncomfortably cold rooms in the winter period which lasts for approximately five months. A double roof consisting of a light upper surface of low thermal capacity, and an air space between it and the main roof structure so that reradiation of heat into the interior of the building is avoided, would allow lower floor to ceiling heights. This should result in some saving in cost over the traditional method and also more comfortable internal conditions throughout the year.

By orientating the buildings to face approximately north-south and by the use of vertical fins, and projecting roofs and canopies it is possible to virtually exclude the hot summer sunshine from entering the building, but at the same time to allow the sunshine to enter the building in the winter.

Care in the planting of trees, shrubs and grass around the building can assist considerably in the shading of the building and in reducing the buildup of heat in the surrounding areas.

Architectural Character

Any tendency to create a monumental building is to be avoided. The health stations are aimed at providing a service for the benefit of the public. The buildings should be inviting, not awe-inspiring. They should appear informal. This aspect is particularly important in less developed and less sophisticated societies where the health service is relatively unknown.

People will need to be encouraged to come to the health station and should not be discouraged by an overwhelming edifice. An "institutional" character should also be avoided. Although corridors are inevitably long, care should be taken to achieve a variety of prospect on the way. Waiting areas should be designed to encourage relaxation and contemplation. Wards should be as informal as possible.

Future Expansion

The more efficient the health service (aided by a well planned building) the more popular it will become, with the result that pressure for additional accommodation will inevitably arise. Wherever possible, expansion should be allowed for by leaving space for the extension of existing departments, so that additions can be made, if necessary, without disturbance to the working of the health station.

SCOPE OF THE PROJECT

The health station will provide consultative, minor curative and general preventive medical service for the population of Sector G-6, under the following general classifications:

1) *Diagnostic and Treatment Facilities:*

- a) Outpatient and minor treatment service including specialist clinics
- b) Treatment of minor accident cases
- c) Treatment of cases requiring limited inpatient care
- d) Reception of cases into the wards for observation
- e) Delivery facilities and inpatient care for normal maternity cases.

2) *Preventive Medicine Facilities:*

- a) A programme of preventive health education by means of posters, demonstrations and exhibitions can be held within the centre itself.
- b) The health station will contain the administrative centre and base for the Islamabad Health Unit.

GENERAL PLANNING

Initially the total complex was examined in terms of its constituent parts and their interrelated functions. In developing the basic relationship into terms of buildings, it was decided to use single story structures as far as possible. By doing this it is possible to create in the physical surroundings an atmosphere sympathetic to human beings.

A further advantage to be gained from single story buildings loosely disposed on the site is the creation of internal areas, which, with careful landscape detailing can impart a calm, restful atmosphere.

DETAILED PLANNING

The Outpatient Department

The major part of total patient loading will naturally fall upon the outpatient department and it was, therefore, placed upon the southern boundary of the site having immediate access from the adjacent boundary road. The outpatient department is divided into male and female (including children) and the Civil Surgeon's Department, providing facilities for government gazetted officers.

The general waiting area, normally subdivided, can, by means of a removable partition, be converted into a single open area for health education demonstration and lecture purposes. In order to avoid any unnecessary duplication of functions the reception and dispensary units are positioned so that they may serve both the male and female sections. Patient circulation from the waiting to the consultant/treatment areas is controlled by the reception office and to rationalize and provide an even greater measure of control over patient flow a system of sub-waiting areas, closely related to the actual consultant/treatment units has been introduced. These sub-waiting areas will be fed from the main waiting area at a controlled rate in order to eliminate a congestion of patients immediately outside the consulting rooms.

Each outpatient department contains a number of consulting rooms, according to anticipated demand, a dressing room and a health technician's room, where minor treatment can be carried out. One of the consulting rooms in the female outpatient department will be specially equipped to deal with gynaecological investigations and will also serve female patients referred for examination from the Civil Surgeon's Department.

Central Treatment Area

This department will serve both the wards and outpatient department and has, therefore, been positioned between them. It contains two minor operating theatres and attached sterilizing room, the diagnostic X-ray department, the fracture room and the maternity delivery suite, which is connected directly to the maternity ward.

An important function of the central treatment area is the reception of minor accident cases which will arrive by ambulance along the service road from the western boundary of the site.

Inpatient Wards

The extent of inpatient facilities is restricted to accommodating short-stay patients with minor illnesses, patients detained for observation, and maternity cases. Basically it is divided into male general (five beds), female and children general (five beds) and maternity (10 beds). Because of the dangers of cross infection the maternity ward has been separated from the general ward and connected directly to the delivery suite, thus forming a self-contained maternity unit.

Two types of bed arrangements have been used, the four-bed ward unit and single rooms, which constitute 20 percent of the total beds provided. This method of bed distribution has the advantage of adaptability, as the single rooms can be used for purposes other than those specified.

Central Administration and Islamabad Health Unit

Although not concerned directly with patients, the central administration unit controls the everyday running of the centre and is, therefore, functionally in contact with all departments. It has, therefore, been placed centrally within the station. It has a dual function in that it also houses the offices of the Islamabad Health Unit which controls public health.

Stores and Services Buildings

These are placed in the northern corner of the site, grouped around the service access road. The stores are both specialized, containing equipment used in public health field work, and general, serving the needs of the station itself. The service area contains the autoclave, which will provide sterilized equipment and dressings, the related boiler house, laundry and kitchen.

STRUCTURE AND SERVICES

The design of the centre being almost entirely composed of single story construction, the most economical method of structure is load-bearing brick walls. These have been used on a unidirectional grid of 12 feet with flat concrete slab roofs spanning in the 12-foot direction. Rooms are then disposed on either side of a central corridor, which extends to connect individual units, in the form of covered ways. The climate of Islamabad, annually ranging between the two extremes of heat and cold, poses special problems in the design of buildings. This is even more important in the Health Centre, where the occupants are naturally more sensitive to uncomfortable conditions due to their physical condition. The most important consideration is to avoid the heating up of the rooms by solar radiation in summer.

Over the main structural flat roof a light, sunshade "parasol" roof is erected which will prevent the sun from shining directly on to the main roof. Between it and the main roof is an air gap, large enough to allow a reasonable air flow which

will remove the heat generated by reradiation from the parasol roof. The normal range of services are provided, water, electricity, etc., which follow the runs of covered ways and internal corridors at ceiling level and branch off into rooms as required. Drainage will follow a similar route but will run in ducts below ground level. The delivery suite and minor operating theatres will be air conditioned by means of a localized plant.

Future Expansion

To anticipate future expansion, space has been retained at the northeastern corner of the site for a further ward unit, and by nature of the repetitive grid layout each department may be extended by 12-ft. modules as the need arises.

APPENDIX III

BASIC HEALTH UNIT/MEDICAL AID

(Only Outpatient facilities)

Staff:

Doctor	1
Hakim	1
Lady health visitor	1
Midwife	1
Health technicians	2
Sanitarian	1
Family planning staff	2
Other staff	2
	<hr/>
Total	11

Space Requirements:

Doctor's room	180 sq. ft.
Hakim's room	180 sq. ft.
Lady health visitor	100 sq. ft.
Midwife	100 sq. ft.
Sanitarian	100 sq. ft.
Family planning staff	180 sq. ft.
Waiting areas	400 sq. ft.
Dispensary	200 sq. ft.
Injection/dressing room	200 sq. ft.
Stores	200 sq. ft.
Cleaner's room	60 sq. ft.
Male staff toilet	80 sq. ft.
Female staff toilet	90 sq. ft.
Male patients' toilet	120 sq. ft.
Female patient' toilet	120 sq. ft.
	<hr/>
Total net area required	2,310 sq. ft.
Circulation space/communica- tions and walls 35% of net era	800 sq. ft.
	<hr/>
Total	3,110 sq. ft. Say 3,100 sq.ft.

APPENDIX IV

**RURAL HEALTH CENTRE/
TOWN HEALTH CENTRE/SUBCLINIC**

(Beds - 10)

Staff:

Doctors	2
Hakims	2
Lady health visitors	2
Family planning officer	1
Midwives/naids	4
Sanitary inspectors	2
Technicians	3
Dispenser	1
Other staff	<u>10</u>
Total	27

Space requirements:

Doctors' rooms	2 x 180 sq. ft.	=	360 sq. ft.
Hakims	2 x 180 sq. ft.	=	360 sq. ft.
Lady health visitors	2 x 100 sq. ft.	=	200 sq. ft.
Family planning officer	1 x 150 sq. ft.	=	150 sq. ft.
Midwives/naids	4 x 40 sq. ft.	=	160 sq. ft.
Sanitary inspectors	2 x 75 sq. ft.	=	150 sq. ft.
Technicians	3 x 50 sq. ft.	=	150 sq. ft.
Waiting areas	2 x 300 sq. ft.	=	600 sq. ft.
Dispensary		=	300 sq. ft.
Injection/dressing rooms	2 x 100 sq. ft.	=	200 sq. ft.
Stores--Medical/General	2 x 150 sq. ft.	=	300 sq. ft.
Cleaners' rooms		=	120 sq. ft.
Male staff toilets		=	120 sq. ft.
Female staff toilets		=	120 sq. ft.
Male patients' toilets		=	180 sq. ft.
Female patients' toilets		=	180 sq. ft.
Ward 10 beds	10 x 80 sq. ft.	=	800 sq. ft.
Nurses' station		=	100 sq. ft.
Nurses' room		=	100 sq. ft.
Doctors' room		=	100 sq. ft.
Treatment/dressing room		=	100 sq. ft.
Linen storeroom		=	100 sq. ft.
Stretcher bay		=	80 sq. ft.
Cleaners' room		=	60 sq. ft.
Ward toilets male/female		=	120 sq. ft.
			<hr/>
Net area required		=	5,210 sq. ft.
Circulation space 35% of the net area		=	1,820 sq. ft.
			<hr/>
Total		=	7,030 sq. ft.
			<hr/>
	say		7,000 sq. ft.

APPENDIX V

TEHSIL HOSPITAL

(Beds - 60)

Staff:

Specialists	5
Doctors	10
Dental surgeon	1
Nurses	12
Midwives/naids	15
Sanitary inspectors	4
Lady health visitors	3
Radiographers	2
Pharmacist	1
Dispensers	3
Technicians	16
Administrative staff	8
Other staff	60
	<hr/>
Total	140

Distribution of 60 beds:

Medical	15
Surgical	15
Paediatrics	12
Obstetrics and gynaecology	12
Isolation	6
	<hr/>
Total	60

Space requirements:

Medical superintendent	1 x 240 sq. ft.	=	240 sq.ft.
Specialists	5 x 180 sq. ft.	=	900 sq.ft.
Doctors	10 x 180 sq. ft.	=	1,800 sq.ft.
Dental surgeon	1 x 180 sq. ft.	=	180 sq.ft.
Sanitary inspectors	4 x 75 sq. ft.	=	300 sq.ft.
Lady health visitors	3 x 75 sq. ft.	=	225 sq.ft.
Radiographers	2 x 50 sq. ft.	=	100 sq.ft.
Administrative staff	8 x 60 sq. ft.	=	480 sq.ft.
Toilet facilities for 140 staff members 60 sq.ft--7 persons	60 x 20 sq. ft.	=	1,200 sq.ft.
Toilet facilities for outpatients		=	600 sq.ft.
Outpatients' waiting areas	7 x 150 sq. ft.	=	1,050 sq.ft.
Reception/issuance of slips/record room		=	600 sq.ft.
Injection rooms/dressing rooms	4 x 100 sq. ft.	=	400 sq.ft.
Dispensary with store		=	400 sq.ft.
Casualty:			
Reception at trolley bay		=	200 sq.ft.
Doctors' duty room		=	100 sq.ft.
Treatment room		=	180 sq.ft.
Observation room 4 beds		=	400 sq.ft.
Stores, etc.		=	100 sq.ft.
Nurses' duty room		=	100 sq.ft.
X-ray		=	500 sq.ft.
Laboratory/blood bank		=	800 sq.ft.
F.C.G. room		=	120 sq.ft.
Physiotherapy		=	360 sq.ft.
Labour suite		=	2,500 sq.ft.
Twin operation theatre suite (Anaesthetic, growing scrub, set up sterilization theatres, disposal of)		=	3,000 sq.ft.
Medical stores		=	1,500 sq.ft.
General stores		=	1,500 sq.ft.

Kitchen	=	500 sq.ft.
Laundry	=	300 sq.ft.
Mortuary	=	200 sq.ft.
		<hr/>
Net area	=	20,835 sq.ft.
Circulation space 35% of net area	=	7,290 sq.ft.
		<hr/>
Subtotal	=	28,125 sq.ft.
Wards: Two 30-bed wards with 20% of beds in single rooms (including circulation space and facilities of the ward)		
	180 x 60 sq. ft.	=10,800 sq.ft.
		<hr/>
Total	=	38,925 sq.ft.
		<hr/>
	say	39,000 sq.ft.

APPENDIX VI

DISTRICT HOSPITAL

(Beds - 250)

Staff:

Specialists	15
Doctors	30
Dental surgeons	4
Nurses	50
Lady health visitors	6
Midwives/naids	86
Physiotherapist	1
Dispensers	6
Radiographers	6
Pharmacists	4
Technicians	39
	<hr/>
Total	247

Distribution of beds:

Internal medicine	50
General surgery	50
Paediatrics	40
Eye and E.N.T.	40
Obstetrics and gynaecology	30
Dental	10
Psychiatry	20
Isolation	10
	<hr/>
Total	250

A District Hospital will consist of the following departments:

Service	Department
1) Administration services	a) General administration b) Main entrance accomodation c) Medical records
2) Inpatient service	a) General acute wards b) Children's wards c) Maternity department i) antenatal clinic ii) reception and admission iii) operating theatre suite iv) special baby care unit d) Isolation beds
3) Main operating facilities	a) Operating suites and related rooms b) Theatre sterile supply unit (for department no nearby central sterile supply dept.)
4) Diagnostic and treatment facilities	a) X-ray department b) Pathology department c) Mortuary and post mortem room d) Department of physical medicine i) Physiotherapy dept. ii) Occupational therapy dept. e) Medical photography

- 5) Outpatient service
 - a) OPD (consulting suite)
 - b) OPD (operating theatre suite)
 - c) OPD (day ward)
 - d) OPD (dental suite)
 - e) Accident and emergency department
 - i) minor operating theatre suites
 - ii) recovery and short-stay unit
 - iii) orthopaedic and fracture clinic
 - iv) departmental accomodation
- 6) Service facilities
 - a) Pharmacy department
 - b) Central sterile supply department
 - c) Central kitchen
 - d) Laundry
- 7) Staff facilities
 - a) Dining rooms
- 8) Hospital engineering and work services
 - a) Boiler house
 - b) Works department
- 9) Psychiatric patients' service
 - a) Short-stay psychiatric unit
 - b) Treatment centre
 - c) Psychiatric ward for patients
 - d) Rehabilitation centre for psychiatric patients

Space requirements:

1) Administrative service:

a) General administration:

i) Hospital Administrator's office	180 sq.ft.
ii) Assistant Hospital Administrator's office	100 sq.ft.
iii) Matron's office	120 sq.ft.
iv) Assistant Matron's office	100 sq.ft.
v) Secretarial staff typists/clerks	700 sq.ft.
vi) Waiting space	150 sq.ft.
vii) Additional office	150 sq.ft.
viii) Committee room	500 sq.ft.
ix) Sanitary facilities	
Male	150 sq.ft.
Female	200 sq.ft.

x) Stores	120 sq.ft.
xi) Cleaners' room	60 sq.ft.
b) Rooms related to the main entrance:	
i) Central inquiry counter	60 sq.ft.
ii) Telephone exchange	120 sq.ft.
iii) Wheel chair and trolley store	100 sq.ft.
iv) Gift shop	100 sq.ft.
v) Sanitary facilities for visitors	
Male	50 sq.ft.
Female	50 sq.ft.
c) Medical records:	
i) Reception counter	120 sq.ft.
ii) Medical record officer's office	120 sq.ft.
iii) Recrd clerks	120 sq.ft.
iv) Stores	2,500 sq.ft.
v) Sub-waiting space/typist	160 sq.ft.
vi) Duplicating and microfilming space	150 sq.ft.
vii) Toilets	
Male	50 sq.ft.
Female	50 sq.ft.
	<hr/>
Net area required	6,280 sq.ft.
Circulation space 30%	1,884 sq.ft.
	<hr/>
Total	8,164 sq.ft.

2) Inpatient service

a) General acute wards 150 beds:

i) Internal medicine	50
ii) General surgery	50
iii) Eye/ENT	40
iv) Dental	10

with 10% of beds in single rooms for intensive care, etc. Space requirement per bed 180 sq. ft.

180 x 150 17,000 sq.ft

- b) Children's ward - 40 beds
 Space requirement is more,
 putting it @ 200 sq. ft.
 per bed - 40 x 200 8,000 sq.ft.

c) Maternity department

i) Antenatal clinic including waiting space	2,000 sq.ft.	
ii) Reception and admission	400 sq.ft.	
ward unit 30 beds @ 200 sq. ft.	6,000 sq.ft.	
iii) Labour suite	2,500 sq.ft.	
iv) Special baby care unit	500 sq.ft.	
d) Isolation beds 200 sq.ft. per bed	2,500 sq.ft.	
Total inpatients minus psychiatry, i.e., 230 beds and maternity block	38,900 sq.ft.	38,900 sq.ft.

3) Main operating facilities:

Four operation theatre and sterilization units 10,500 sq.ft.

4) Diagnostic and treatment facilities:

a) X-ray department office reception and filing rooms	200 sq.ft.	
Patients' waiting room	100 sq.ft.	
Patients' lavatories	100 sq.ft.	
Changing and preparation	60 sq.ft.	
Kitchen and sluice	120 sq.ft.	
X-ray diagnostic rooms (2 rooms) 350 x 2	700 sq.ft.	
Film pressing	200 sq.ft.	
Staff room	120 sq.ft.	
Cleaners' room	60 sq.ft.	
Mobile X-ray	100 sq.ft.	
Film and chemicals stores	400 sq.ft.	
Circulation space 30%	648 sq.ft.	2,808 sq.ft.
b) Pathology department		6,000 sq.ft.
c) Mortuary and post mortem room		500 sq.ft.

d) Department of physical medicine		
i) Physiotherapy		1,000 sq.ft.
ii) Occupational therapy		1,000 sq.ft.
e) Medical photography		<u>200 sq.ft.</u>
Total		11,508 sq.ft.

5) Outpatient services:

OPD consulting suites	7,000 sq.ft (twin rooms)	
Dental suite	675 sq.ft.	
Accident emergency department	5,000 sq.ft.	12,675 sq.ft.

6) Service facilities:

i) Pharmacy department	3,000 sq.ft.	
ii) Central sterile supply department	3,000 sq.ft.	
iii) Central kitchen	2,000 sq.ft.	
iv) Laundry	3,000 sq.ft.	11,000 sq.ft.

7) Staff facilities: 3,000 sq.ft.

8) Psychiatric unit:

i) Treatment centre	2,000 sq.ft.	
ii) Psychiatric ward	5,000 sq.ft.	7,000 sq.ft.

9) Boiler room, etc. 1,500 sq.ft. 1,500 sq.ft.

Total 104,247 sq.ft.

say 104,200 sq.ft

APPENDIX VII

HEALTH REFORMS

The People's Health Scheme aims at bringing medical treatment within easy reach of the common man both in terms of distance and cost. The People's Health Scheme envisages an integrated approach to the problem of a community. It will deal with the treatment of diseases and its prevention including health education, environmental sanitation, potable water supply, the disposal of sewage and waste, nutritional aspects, school health programmes and other related matters. All the preventive and curative services shall radiate from the same health units/centres with the same staff having responsibility for the total health situation in the areas of their jurisdiction, i.e., a comprehensive integrated approach. To accomplish this, a comprehensive scheme has been drawn, spread over a total period of seven years for complete implementation. The salient features of the scheme in a phased programme are:

- 1) In the first phase a network of health units shall be established in the country at the rate of one for

every union council area in villages and union committee areas in towns. All these units shall be completed in the first four years of the Scheme. Each unit will cover a population of about 10,000 and shall be adequately staffed. Out of every five such units the fifth one shall be much larger than the others with more and better staff and 10 beds.

- 2) These two types of health units will serve as tiers in the chain of the various facilities. There will be two further tiers, namely hospitals located at tehsil/taluka headquarters and district headquarters. The tehsil level hospitals shall provide coverage in all major specialities and the district headquarters hospitals in all specialities including mental and psychiatric diseases and occupational therapy.
- 3) All medical institutions except for defence establishments and those inside jails and those of semi-autonomous organizations will be part of this scheme. However, private hospitals and nursing homes, etc. shall be allowed to continue but standards shall be prescribed for them.
- 4) Every qualified doctor, pharmacist and paramedical staff shall be absorbed.
- 5) The manufacture of medicines under their generic names as against the brand names, already introduced, is a milestone in the medical history of Pakistan and would reduce considerably the prices of medicines and drugs to the common man. The sale of medicines under trade names shall be prohibited from 1 April 1973.
- 6) Import of raw material and exceptional finished drugs shall be allowed by the Trading Corporation of Pakistan. The manufacture of all types of medical instruments, equipment and consumable stores such as X-ray films shall be carried out within the country which will further reduce the cost of treatment.
- 7) Discretionary quota for education in medical colleges has been abolished and merit will now be the only criterion for admission. A percentage increase in the number of seats in the existing medical colleges has also been introduced, raising the number of seats from 900 to 1,150 to accommodate more students. The number is likely to be increased by 40 to 50 percent in 1975. A new medical college at Quetta

has started functioning and shall be admitting 70 students this year. An undergraduate medical college has been approved to be commissioned within the premises of Jinnah Post Graduate Medical Centre, Karachi. M.B.B.S. classes with 150 students as first admission shall be started in March 1973.

- 8) The medical service shall be separated from pharmacy work for which a new service shall be created. In future only members of the pharmacy service shall be in charge of pharmacy work. To this service only graduates in pharmacy shall be recruited.
- 9) All existing dispensaries, rural and urban, government and local body which are the counterparts of the new basic health units and rural/town health centres conceived under the Scheme shall be brought up to the standards laid down for their respective type of units in the first year of the Scheme.
- 10) Medical reimbursement to government servants has been stopped with effect from 1 July 1972.
- 11) Higher hospitals shall have their provision for medicines increased to three times the existing provision in 1973.
- 12) Training of paramedical and auxiliary staff shall be started at district headquarters and tehsil/taluka hospitals.
- 13) During the fifth to seventh year all the tehsil/taluka and district headquarters hospitals shall be improved and completed. During this period 11 national institutes in special fields of medical science shall also be established.
- 14) The total expenditure in a seven-year span is anticipated at something like Rs. 3,800 million, with some Rs. 350 million needed in the first year.

MANPOWER MANAGEMENT IN RAZI MEDICAL CENTER (MENTAL HOSPITAL)

by

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The "disease concept" of mental illness has a long history in Iran. A thousand years ago in Iran the famous Iranian physician, Avicenna, devoted a chapter of his textbook on medicine to mental illness.

Although in the treatment of a mentally ill person, prayer and some superstition was used, still he was a "patient" and not a person possessed by a demon and in need of persecution or burning.

The method of treatment in hospital was physical and the aim was custodial. In *Yazd History*, a story about a hospital built in the beginning of the thirteenth century, we found physical and mental wards (Majless Madjanin) in one hospital but in different buildings. So, in Iran the change of attitude about mental illness was not sudden and drastic. The Razi Hospital was based on the European method of treatment, and was founded about 50 years ago. The hospital was concerned mainly with security, preventing escape and protecting society from the patient. Since then the hospital has undergone many changes.

In spite of overcrowding and well locked wards, Razi Mental Hospital was able to establish some occupational therapy and better care of the patient. The number of patients has progressively increased and is now between 2,500 and 3,000.

Five years ago the Ministry of Health took over the responsibility for giving new life to hospitals. Many invalid and nonpsychiatric patients were transferred or discharged and the number of patients decreased to 1,500 to 1,700. This reduction was partly due to a change in the number of psychiatrists from five to 15 and a fourfold increase in the budget.

However, we should cope with an ever-increasing demand for admission because of better service.

We started to have patients referred to Razi from the armed forces, the police, civil servants, the provincial health departments and many other governmental offices and our active outpatient department was very busy. Acceleration of the discharge rate among socially invalid patients was impossible.

At this stage we thought the acquisition of more capital or more staff was not practical, and in order to get the most out of our available resources, we should have more efficient administration and better manpower management.

I think every psychiatrist will accept the importance of management in a mental hospital and will come to some agreement with Dr. Clark's opinion in his famous book *Administrative Therapy* concerning the effect of administration in a mental hospital.

I will discuss some of our devices which we found useful:

- 1) *Admission Ward*. In our old system every patient was allocated to a ward which was responsible for admission on that particular day. The patient would stay in that ward for treatment and it depended on his

situation whether he would stay for a few days or all his life.

We first established two wards for female and male admissions and now there are five groups, one for rehabilitation, two for males and the other two for females. In each group three psychiatrists are responsible for deciding whether the patient should be admitted under the classification short-stay ward, medium-stay or under active treatment, long-stay or deteriorated.

In this system a continuity of treatment is possible. The patient is admitted by a group in their admission ward or intensive care unit and then the patient either becomes discharged or becomes quiet and could go to an open ward and will be under active treatment, or he deteriorates and goes into a chronic ward. By this method the number of discharges has increased and the average stay of acute cases has decreased.

- 2) *The Role of the Duty Doctor.* Two doctors used to be responsible for the afternoon care of the patient in the ward and for night duty. Their afternoon duty was abolished and they became responsible only for taking the history of the patient and urgent duty.

We encourage them also to apply for training in psychiatry at the university in the morning and some of the post graduate students of psychiatry were chosen for this job.

- 3) *Discharge System.* I think we all agree that the problem of discharge of the mentally ill person is less likely to be seen than in the physically ill. Many patients have no fixed address and the reluctance of the family to accept the patient even after partial recovery is still a problem. This pattern becomes more evident when disruption of family ties and an economic crisis in the family lead to complete rejection.

We know that the social problems of the mental patient are so important that a special type of social worker (P.S.W.) is needed, but in Iran all social workers have the same training and no P.S.W. is yet available. We put all hospital social workers in the discharge department and the hospital provides transport from hospital to home under the supervision of an aide-nurse for some patients. As 60 percent of our

patients are natives of provinces outside of Tehran, appropriate buses in all directions are needed to take the patients. If the patient's condition is good enough we provide a ticket, although most of our patients are not certified. We do this because there were many complaints that the patient did not return home.

- 4) *Medical Records.* Some of the important reasons for maintaining correct medical records in psychiatry follow:
 - a) Treatment of mental illness is a long and periodic process and the patient passes through stages of good and bad mental states. Having the full history of the illness is vital and gives important information in the diagnosis, treatment and prognosis of the illness.
 - b) Comparison of intelligence and personality of the patient reveals the speed of deterioration.
 - c) The patient may choose a different name or family because of his or her delusional content of thought and only after recovery would this be known to the hospital. This is worse when the patient has lost his identification card and the family are not informed about his admission or are reluctant to come to see him.
 - d) The reluctance of the family to look after the patient, especially in senile dementia and mental deficiency cases, leads to the giving of false names and addresses and to deny past history. Even when the patient's condition is not bad and he will be able to do some job, it is still difficult to keep the patient employed and the poor family prefer him to be admitted to the hospital rather than to have him at home without a possibility of employment in the labour market.
 - e) The patient may be brought to the hospital by the police and be unable to give his name or proper information about himself. All these problems encourage the medical record officer to include more than one peculiarity of the patient in his list and not to rely on a family name. Because of all these problems the Razi Medical Center employs a system based on first name, father's name and family name in alpha-

betical order (the Iranian language has 32 letters). By combining these three words one can find a small card on which the number of the patient's record is indicated.

Usually the patient's medical record and administrative record are together. The medical record will be sent to the admission ward and if there were several previous admissions all are included in the record. The administrative record will remain in the office for further correspondence. When the patient is discharged they will act on the administrative record and the medical record will be sent back to the office. With all these changes we have been able to return an average of 400 patients monthly to their home.

I am not inclined to think all changes are due to the four points I mentioned before, and I am sure you are aware of a shortcoming of statistics to evaluate the effect of any single factor in a complex subject such as the discharge rate in a mental hospital.

I have tried to suggest that it would be possible to increase the efficiency of a mental hospital not only by more money and more staff but also by better manpower management.

The search for methods that will result in better management should be based on a study of the legal system, traditions, and family set-up of each country and also on consideration of current trends and research in hospital administration and social sciences.

I will be very pleased if any of the distinguished members of this conference would advise and criticize our program. I am sure we can learn from your experience and we will adapt it to our particular situation. I would like also to stress the importance of further study of mental hospital management and I believe sooner or later we should close our chronic hospital and transform it for the mentally ill patient. This has happened in many parts of the world and we have made a beginning in Iran. Because of these developments I think we need an active body for the training of new administrators for mental hospitals in this part of the world.

I appreciate this opportunity to present to you my report of our current effort and I hope we will be able to provide better services for our patients.

WORK PLANNING AND CONTROL*

by

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Most people seem to think that production control applies only to a manufacturing situation and that it could not be widely used in the hospital. As a result, very few hospitals have considered installing a system of work planning and control--which is what production control is--except in isolated areas. But a production control system is equally applicable to practically every area of the hospital's operations. With a little adaptation the principles of work planning and work control are as valuable in the service organization of the hospital as they are in the production of a manufacturer.

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"Planning" and "control" are not two separate functions of management; they are a correlated system. Without a plan, there is no basis for control. Practically everyone uses some type of work planning and control system, but without conscious thought and effort it may incorporate only part of what a good system will cover. People may make plans but forget the controlling phase. Or controls may be superimposed on other controls to no purpose. Or the planning may be insufficient to establish adequate controls.

What is a work planning and control system? It has been characterized as "organized foresight plus corrected hindsight," and this is quite valid. Basically, it's a system of before-the-fact planning and after-the-fact scorekeeping. For our purposes, though, perhaps a more efficacious definition should be used: "A work planning and control system is the design and use of a systematic procedure for coordinating all the elements of production or service." The objective of work planning and control is a maximum production of goods or services with a minimum of confusion or expense. To reach this objective, we must have some systematic method by which production can be governed and measured.

Most modern work planning and control systems have a high degree of control. It is in this controlling phase that the greatest improvements in a system can be made. The basic elements for control are three: a plan or knowledge of what is supposed to happen; a system of progress reporting or a knowledge of what is actually happening; and corrective action or a means of adjusting what is actually happening to bring it into line with the plan. Obviously, this is no one-time affair. These elements follow a definite sequence and the cycle is reported. You plan, you report progress, you take corrective action. When you take corrective action you have re-examined and re-evaluated your plan (or at least part of it) and have altered it. After this is done, a progress report is made and you are back again to corrective action.

A system of work planning and control is broken down into two basic parts--the planning phase and the action phase.

In the planning phase, you must determine: 1) the objective or forecast, 2) the system for preparing orders or the authorization to accomplish work, 3) a clarification, amplification, and compilation of the job specification--that is, a succinct statement of what is to be done, 4) how the work is to be done, 5) the implements and controls needed to perform the job, including materials, tools, equipment, space, and personnel, 6) where the work is to be done, and 7) when the work will be done.

After all these components have been delineated, the action phase begins. This phase consists of three steps: first 1) the work is started and second 2) it is followed up and progress reports are made. For many reasons, very few plans are carried out exactly as intended, and in the third step 3) the plan is revised or corrective action taken.

Here then, in outline form, are the elements to be considered in a work planning and control system. The system can be applied to any section of a hospital department, to any department, or to the institution as a whole. Now let's take up these elements, one by one.

THE PLANNING PHASE

Every hospital operates on an annual financial basis, and the institution must make a forecast to set up its fiscal plan. These forecasts may be based on historical analysis of past experience, on trends or patterns from past actions, or on availability of prior knowledge about future events. But before an accurate forecast can be drawn up, all the other steps in the planning phase must be considered. We must know who can authorize work, what is to be done and how, what controls and implements are necessary, where the work will be done, and when.

The preparation of orders or the authorization to accomplish work may not seem too important at first glance, but it is absolutely necessary that everyone understand clearly who has this authority. For example, physicians are ordinarily the only people who can prescribe medical treatment; there would be no medical control if nurses, therapists, and others were allowed to write prescriptions (and one might even question whether the patient would get the treatment he needed). Or again, think what it would do to the dietary service's budget if every cook were authorized to determine the food served at each meal. If everyone in the hospital were authorized to spend funds as he or she desired, the institution would go out of control, and probably out of operation, in a short time. On the other hand, if the laundry superintendent did not exercise his authority to determine what could be processed in the laundry, he could be swamped with the personal laundry everyone might bring in. The authorization to accomplish work must be defined and limited; the responsibility must be definite, clear-cut, and readily understood.

The next part of the planning phase is the clarification, amplification, and compilation of job specifications--or, more specifically, the identification of what is to be done. A statement of the mission, program, and function of the job un-

der consideration is essential. Broadly, there should be an organizational chart, a functional chart, individual position descriptions, policy statements, regulations, and program guides; on a short-range basis work orders and patient-treatment orders should be included. When any new procedure is added, the plan must be altered and the forecast modified.

If forecasts are to be made accurately, and a high degree of work control maintained, we must know exactly how the work will be accomplished--the next step in the planning phase. Maximum control requires standardization of procedures and methods wherever possible. A good work planning and control system will incorporate standing operating procedures, job requirements, and work standards. When work standards are established and followed, quantity and quality can be maintained and a forecast is relatively easy.

After following the preceding steps in the planning phase, it is much less difficult to determine the materials, tools, equipment, space, and personnel needed to perform the job. Inherent in this step is delineation of various controls to be sure that what is planned is used for the purpose intended. Some examples: If the standard portion of meat is not served at all meals, it would be difficult to regulate the total amount of meat being used. Or, in the pharmacy, we must be absolutely sure of the amount and content of drugs in each prescription dispensed to patients. Again, idle equipment is usually worth nothing to us; it is actually a liability. With the exception of certain specialized medical equipment, full value is not received from equipment used only a few hours each day. And, a tight control must be kept on tools. Without restraints, they have a way of getting lost and this throws estimates out of line.

The greatest expense, and probably the most important single item in determining what is needed, is personnel. If we know what is to be done, and have work standards by which the work will be accomplished, we can more accurately ascertain the number of people required. The work standards applicable here include the qualifications, aptitude, and abilities of personnel; methods and procedures; time factors such as productive and nonproductive time; and so on. It is of little value to the administrator for a department head to ask for additional personnel simply because "I need them." Such requests must be substantiated with factual information stating what is being done, what is to be done, and how, along with other data that will justify the increase. Only with this information can good decisions be made.

The next part of the planning takes up the locale of the work. This may seem unimportant--after all, if we know what the

work is we think we probably have a good idea of where it's done. However, this is not always the case; and to prove it simply take a look at the different duties performed in patient-treatment areas, the kitchens, the laboratory, the pharmacy, and others. Suppose, for instance, that one department decided it no longer needed to perform a certain function. This function is necessary, though, and so the burden of its performance falls someplace else--a frequent occurrence in the hospital. At that point, it becomes absolutely necessary to determine just where, and by whom the duties should and will be performed.

Now we come to the last step in the planning phase: determining when the work is to be scheduled or performed. It is scarcely necessary to note that a hospital functions on a 24-hour-a-day basis, complete with emergency situations. It is necessary, however, to point out that one must take a careful look at all the functions performed in the hospital in order to ensure that work is scheduled when it can be done most effectively.

In review, you may now realize that some of these elements in the planning phase have not been fully realized in your own work planning and control system. Your system will be more effective, the action phase much smoother, and forecasting much simpler, if each of these steps is considered to its fullest. The value of accurate and thorough planning cannot be over-emphasized; besides enabling most operations to function efficiently, it will also determine to a large degree the success of any work planning and control system.

Unfortunately, some people approach planning inadequately; they plan only minimally and then wind up doing a lot of adjusting. Their "system" is to make a start and wait for things to go wrong that they can correct. Although it is not possible to anticipate everything that might go askew, taking the time for thorough planning will eliminate many of the unexpected problems that occur with sketchy planning. This is preventive management. It should help to circumvent management-by-crisis and ensure management-by-exception.

THE ACTION PHASE

Now that the planning phase is complete, the action phase begins. The first step is to communicate the plan of operation to everyone concerned. All must know exactly how and what is to be done, who is to do it, which tools to use, where the work is to be performed, and when. Then people must be trained in methods to implement the plan.

The second step of the action phase, and one of the most important elements in the whole work planning and control system, is the follow-up. People are creatures of habit; if new methods and technics have been established a follow-up is vital to make sure these changes are put into effect and carried out according to the plan. Much time can be spent in designing a plan that will function smoothly, but without a follow-up this time will often have been wasted. Further, the follow-up must continue until each step in the job becomes routine for every employee. Employees will (both unintentionally and intentionally) fall back into their old habits if their supervisors do not instruct, explain, and encourage, to prevent this. Since the plan will never be completely perfect, proper supervision is also necessary to make the various adjustments. And this leads us to the last step of the action phase: plan revisions or corrective action.

Some method of procedure must be set up so that corrective action can take place with a minimum of delay and difficulty. Although this is a very necessary part of planning, it is too often forgotten. Plans that do not provide a method for corrective action are both incomplete and liable to trouble. In the planning phase, the second step dealt with determining who could authorize the accomplishment of work. This same individual should also be authorized to take the corrective action, with the limitation that the effect of the action on the overall plan must first be carefully considered. The total plan must be studied before any change is made, no matter how minor. Otherwise you run the risk that minor changes will set into motion a snowballing series that will eventually disrupt the whole operation, particularly since one change made in disregard of the plan will engender others.

Related and by-product controls, particularly quantity, quality, and cost controls, will determine when the corrective action is necessary. Whenever this action is taken and adjustments are made, everyone must be so informed and the changes must be published.

While a work planning and control system can function without establishing every point discussed above, incorporating them all will result in a much more effective, and successful, operation.

EVALUATING THE SYSTEM

As we have seen, work planning and control is the design and use of a systematic procedure for coordinating all the elements of production or service. With its broad scope, ranging

from forecasts based on comprehensive planning to development of controls that indicate how well the plan is functioning, the work planning and control system is the vital organ of any organization. But to be well-planned, the system should also provide a means for its evaluation.

Two technics may be used for this. Externally, all the parts of the system can be examined to see if any is missing. For more detail, each part can be observed to determine the extent to which it is being applied and the quality of application. Beyond this, further observations will depend on the complexity of the system and the desires of management for a complete study.

Evaluated internally, the seven principles enumerated below will give a good indication of the work planning and control system's soundness.

The first principle is that the system must furnish timely, adequate, and accurate information. Before the work is scheduled and begun, such information as how long the work should take, the method by which it should be performed, and the resources that are to be utilized, must be available. However, this is only the beginning, since communication of facts--during work and after work is completed--is the lifeline of the work planning and control system.

The degree of detail required by this first principle will vary, as will the acceptable limits of accuracy. Obviously, such widely differing activities as those included in treating patients will be controlled on wide tolerance limits. The required reports should provide information that is accurate, complete, obtained on a schedule that will ensure timely utilization of the information, and indicative of possible changes so that corrective action can be instituted before the program is disrupted. Records should be such that trends can be noted and forecasts made.

The second principle requires that the system be flexible enough to accommodate necessary changes. Flexibility in the stabilized areas where the activities can be predicted with a reasonable amount of accuracy is as important as it is in the treatment areas where work is more unpredictable. (A plan is still necessary, however. Even in departments where the work is relatively unpredictable and changes are frequent and inevitable, one should still have a routine schedule).

Third, the system of control must be simple in operation and easily understood. Many tools have been devised to assist in work planning and controlling--one such, for instance, is a board designed with a Kardex file, colored markers, date mark-

ers, and strings running horizontally and vertically to show what is planned and the status of various projects at any time. For such a control system to be of value, it must be designed so that people can understand at a glance exactly what the device is supposed to tell them.

The fourth principle is to install a system that is economical in operation. There is a recent tendency to install expensive and complex control systems that involve a costly up-keep often not commensurate with the expected benefits. On the other hand, lack of a comprehensive system is generally reflected in low effectiveness and high overall operating expense. The middle ground must be found in selecting a system. Generally it will boil down to what management is willing to pay for the information it wants and requires. The most economical system that meets the organization's requirements is probably the best.

The fifth principle of work planning and control evaluation is that the system must generate prior planning by the user. A sound system forces its users to schedule or time phase activities well before operations are begun and to make use of all available past information plus forecasts based on changing conditions. This does not mean that no changes may then be made, but rather that there is some basic level of planning knowledge on which to build.

The sixth principle is that a work planning and control system will permit management-by-exception. A good system must cover all routine matters so that the supervisor can spend his time on new or exceptional situations; otherwise, the system needs overhauling. The reports and controls that are required and maintained should point up trends that indicate what is happening in the total operation. From this information the supervisor can form a reasonable judgment on the future course and make his decisions accordingly.

The seventh principle requires that the system place responsibility and provide for authority to take corrective action. To reiterate a previous point, the system should show exactly where responsibility lies, and the person with the responsibility should also have the authority to take corrective action. Without this, many systems will break down. (Nor should the supervisor handcuff the subordinate who has the responsibility by telling him he also has authority but "don't do anything without approval." This is one of the primary reasons for recording delegations of authority and assignments of responsibility.)

In appraising a work planning and control system, several problem situations will undoubtedly be found. Each one of these must be studied separately and thoroughly. Applying a sci-

entific approach will be a great help. With this method one must recognize the basic problem as well as its symptoms, collate and evaluate the information, apply the known methods for improvement, develop a solution, test the solution, and apply it. Before any changes are then put into effect one must look at the total situation and the internal and external factors that affect it. To make a change that would correct one part of the system and at the same time disrupt another is obviously no solution.

Although any supervisor could set up a simple work planning and control system, or perform a limited evaluation of it as described here, a management analyst, industrial engineer, or management engineer should be consulted where a complex system or large and detailed study is required. Work planning and control systems are multi-faceted, and a complete study is a complicated and time-consuming undertaking that encompasses every facet of an operation and requires a specialist trained to investigate, evaluate and design a workable system.

DEVELOPING OF STAFFING PATTERN FOR A HOSPITAL AND SPECIAL PROGRAMMES

by

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Man's concept about healing has changed according to the cause of the disease as understood at various times. In primitive cultures the general belief was that sickness was caused by possession of the body by evil spirits and these evil spirits had to be scared away in order to cure sickness by various means. Usually it was Mantras and Talisman that were recited and sometimes good spirits and souls of ancestors were invoked to expel evil spirits. In the early civilizations this belief in supernatural beings holding sway of various parts of the body of the sick person continued. But the art of healing switched over to the temples where the holy men under the guidance of the gods

practised medicine. With the advent of Hippocrates, the father of medicines, a change in notion took place, that disease arises from natural rather than supernatural causes. Gallen annotated the medical knowledge of his time. Achievements were made also in public sanitation and public baths, sewers and aqueducts appeared. There was some advancement in surgery also in the Greek time.

The place of healing, i.e. a hospital as we know it now, also changed from the house of the sages to the temples and from the temples to the abodes of men of science in the Greek period. After this period there was a stalemate in Europe but the Greek legacy was taken over by the Muslims and advances in the art of healing were made as in other fields of knowledge. Men of eminence like Razi, Bu Ali Seena, Abuul Hassen, and Albaruni appeared on the horizon and made spectacular advances which have left a mark on posterity. Elaborate hospitals were constructed.

There were two types of hospitals known to the earlier Muslims. One was the regular hospital and the other was the mobile dispensary. The mobile dispensaries gained so much momentum in the time of Sultan Mahmood Saljokee that equipment for a mobile dispensary could be carried on not less than 40 camels. The first regular hospital was established during the reign of Walid Bin Abdul Malik. It was a hospital for the lepers. Besides these two types of dispensaries every Jamia Mosque and Najor Shrine provided first aid. The regular hospitals were separately run for males and females and had various wards, headed by separate specialists, such as eye ward, surgical department, mental ailments department, etc., etc. The director of the hospital had under him a full-fledged dispensing unit known as Khazana-e-Mushroobat. The major hospitals also served as teaching centres and huge libraries were attached to these hospitals. Ibn-e-Toloon hospital at Cairo had a library consisting of over one lakh books on medicines. Treatment was free and every indoor patient was provided with free boarding and lodging. In many cases, on discharge the patient was supplied with new clothes and also some working capital to enable him to earn his living. The hospitals were neat and clean. There was running water. Each ward had a sanitary inspector as well as an accountant, etc.

I would like to narrate here an anecdote of a foreign tourist from Ajam who wanted to satisfy himself about the reputation of one of the famous hospitals, namely Noori Hospital at Damascus. He posed as a sick person and remained as an indoor patient for three days. On all the three days he was carefully examined and was provided with sumptuous meals. On the third day the Chief Medical Officer handed over a chit to the so-called patient which said that the hospital provided hospitality for the maximum of three days. This hospital was exclusively meant for indigent people and well-to-do people were only very rarely

treated as outdoor patients. There was a special ward for mentally ailing persons in this hospital.

I close this account of the system of hospitals by giving a few details about another hospital known as Bimaristan-e-Kaladoon. This hospital was established by Malik Mansoor Saif-ud-Din Kaladoon in 1284 Christian era. Apart from other services provided by this hospital, each discharged patient was supplied with elaborate dress and the hospital took full responsibility for funeral rites and burial of dead patients. This hospital also provided services to such patients who preferred treatment at home. Thus the idea of home care was already in vogue. The number of daily patients was more than 4,000. Another interesting feature of this hospital was that it had a special ward for patients suffering from insomnia. The treatment consisted of music, folk dancing, story telling and playing of pleasing comedies.

Later on, however, decadance overtook the Islamic World and the Renaissance came to Europe. There were rapid strides in the field of medicine and allied sciences. The 19th century made epoch-making discoveries in the causation of disease and treatment and hospitals came to the forefront as the centre of treatment, medical education and research. Today the hospital is the pedestal on which the total health care of the community is based.

Today's hospital is a small city. Each part of the city is geared to the needs of the patient.

The hospital has to be an integral part of 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 and its home environment. It has also to be a centre for the training of the health worker and bio-social research. This modern concept of a hospital goes far beyond the conventional idea of a hospital as a place for the treatment (mainly inpatient treatment) of the sick. It visualizes a hospital as a part of a comprehensive system of preventive and curative medicine and as an institution devoted not only to inpatient treatment but also to ambulatory and domiciliary care. Furthermore, the modern hospital has to play an active role in a health and social welfare programme and it has influence on economic development. Hospitals are very expensive to build, their initial capital cost is high and their running cost goes on increasing from year to year. Although apparently unproductive, the dividends are paid in the form of decreased invalidity, reduced unemployment caused by sickness and increased agricultural and industrial production. It is essential, however, that side by side with the system of comprehensive medicine operating throughout the communi-

ty, improving environmental and personal hygiene, occupational, and social health services, there should be a provision of home care service that will enable as many as possible of those who are sick or injured to be nursed at home with merely supporting help from the hospital.

The observance of the trends in clinical medical care, the changing attitude in medical economics, the basic pattern of developing social and health legislation, and evaluation in hospital planning have led to new concepts regarding modern hospitals. The ever changing and advancing concepts of the hospital and its method of operation make it pertinent that whenever a new hospital is planned the future should be peeped into and the needs contemplated at least 20 to 30 years hence. The role of the hospital as the community health centre is to care for the sick. The staff will not only learn as much as possible while giving that care but will teach others as they learn. In other words, hospitals will thus become a centre for research and education. The necessary medical nursing, social work and other services have to be set in a pattern not with rigidity but with fluidity. Traditionally the needed changes inside a long established profession and institution do not come from within, the external factors have a significant role to play. Professional standards have to be maintained while adopting economics and organization under new conditions demanded by society. Even the political trends have to be kept in mind so that when they come near the stage of action, the institution will be in a comparative attitude rather than that of resistance. Professional groups can wield a large influence on the legislature and administration also. The basic goals, however, remain the same, i.e., the care of the sick, the education of the physicians and nurses, and research. In addition training of paramedical personnel such as laboratory technicians, physiotherapists and others may also be envisaged. Proper planning has to be done as necessitated by the changing pattern in society, the shift in age ratio due to the increase in the number of young and old, industrialization and urbanization, economic changes, increasing complexity of hospital care and the cost thereof. The objective should be to make optimum use of the facilities and the personnel without much duplication.

The hospitals are classified broadly into two types, special and general and the staffing has to be done accordingly. Special hospitals deal exclusively with specific organs or a specific system of the body, for example, eye, ear, nose, throat, the central nervous system, orthopaedic, tuberculosis, infectious diseases, cancer, etc. or certain groups of the population, e.g., children. General hospitals have a range of specialized services and aids to provide treatment for men and women and children suffering from any form of illness except highly infectious and dangerous conditions such as smallpox.

The hospital may be of closed or open type. The usual pattern in Europe, Asia and Africa is of the closed type where the physicians are full-time employees in the hospital. In the open type the physicians of the Ilaqa are on the roll of the hospital and they admit and treat their cases. But the distinction is not watertight. Even in the closed hospital, honorary consultants are on the roll. Hospitals may be further divided into teaching and general hospitals. The staffing pattern has to differ for the various types of hospitals because educational needs take priority in the teaching hospitals. The usual concept of a hospital with a surgical and medical unit with a small eye, ear, nose and throat department and another for orthopaedics and gynaecology is outmoded. A modern hospital has all the other facilities conducive towards comprehensive health care.

The most important part of the hospital is the inpatient department and for this the bed strength has to be taken into special consideration from the point of view of immediate needs and future expansion.

Hospital beds are needed when: 1) outpatient treatment is inadequate, 2) domiciliary treatment is not possible, 3) special techniques of treatment are required which comprise continuous supervision by experts in various specialities, specialized investigation, skilled nursing or special equipment.

More indoor beds are needed in developing countries where optimum preventive measures are not prevalent and a host of infectious and communicable diseases have not yet been controlled by public health measures. While the requirements of bed strength are greater in developing countries, there is an actual paucity of beds as will be evident from Table 1.

Table 1. COMPARATIVE RATIO

Country	Population (in millions)	Doctors	Persons nurses	Per O.I.M.	Beds	Beds per 1,000
Ceylon	11.2	5,800	3,790	800	93	3.41
Iran	24.5	3,880	12,330	2,160	940	1.06
Phillipines	32.3	1,330	1,300	880	1,280	0.78
U.K.	47.7	870	390	410	102	9.83
U.S.A.	194.5	700	310	150	114	8.75
Japan	97.0	920	730	250	91	11.00
W.Pakistan	53.8	6,730	12,230	4,480	1,953	0.51
Punjab	37.2	-	-	-	2,624	0.38

Thus the lowest bed population ratio is in West Pakistan, i.e., 0.51 bed per thousand population. While in the advanced countries there is one bed for every 100 to 150 population, we have the dismal low figure and much more so since the morbidity incidence is three to five times higher here.

The staff in the indoor department should be divided into: 1) tenure staff, 2) trainee staff, 3) nursing staff, 4) bearers and sweepers, and 5) laboratory staff, depending upon the size and status of the hospital. To be manageable a unit should be 40 to 50 beds, divided between males and females, according to requirements. The size of the hospital determines the number of units and the general units will be medicines and surgery while the special units shall be, in addition to above, midwifery and gynaecology, paediatrics, eye, ear, nose and throat, orthopaedic, etc. Table 2 illustrates the suggested breakdown in a teaching hospital of 1,200 beds with provision for a 300-bed extension.

Table 2.

1. General surgery	3 units
2. General medical	3 units
3. Midwifery and gynaecology	2 units
4. Paediatrics	2 units
5. Neurology	1 unit
6. Neurosurgery	1 unit
7. Cardiology	1 unit
8. Cardiac surgery	1 unit
9. Respiratory diseases	1 unit
10. Chest surgery	1 unit
11. Eye	1 unit
12. ENT	1 unit
13. Urology	1 unit
14. Orthopaedics	1 unit
15. Plastic surgery and burns	1 unit
16. Psychiatry	1 unit
17. Dermatology	1 unit
18. Radiotherapy	1 unit

There is a trend to have a psychiatry department in general hospitals also. A neuropsychiatrist of experience is needed.

Intensive care will be provided where the critically ill patients will be concentrated under constant surveillance with emergency techniques and equipment immediately available and with nursing staff especially trained and selected in such a

unit. The obstetrical department will also have a clinic for planned parenthood.

The department of pathology comprising laboratories will be the major forum for diagnostic help and research. It comprises: 1) a bacteriology, immunology and parasitology section which will be responsible for: a) cultures and chemical, immunological and animal studies, b) antibiotic sensitivity procedures, c) preparation of vaccines, d) intradermal testing and other studies of antigen, antibodies, and e) procedures for detection and identification of parasites, 2) a biochemistry and diagnostic radio isotope section which will be responsible for biochemical analysis on body fluids, excretions, blood and tissues for the determination of metabolism function, electrolytes acid base balance, hormones function test, etc., 3) a blood bank section, 4) haematology and 5) tissue preparation section. At the district level the laboratory may not be so extensive. At the provincial level a central laboratory may also be considered which will standardize all the procedures to be followed by the laboratories in the province so as to ensure proper performance and this laboratory may also offer teaching for M.Sc., Ph.D. and medical graduates, a course for graduate laboratory technicians, and refresher courses for doctors and laboratory technicians. Each department of the laboratory should have a proper and ample experienced staff. The pathologist aided by an assistant pathologist specialist in the various branches and a team of laboratory technicians will be necessary.

The blood bank may be set up as an independent department.

The radiological services are the other strong arm of the hospital in the diagnostic field. In the bigger hospital, radiotherapy facilities will also have to be provided with proper staff. In the teaching hospital, a department of nuclear medicine will also be necessary with proper trained staff.

For surgical treatment a modern operation theatre with recovery rooms is a must and is to be constructed on the consideration of safety for the patients, good bacteriological control and good working conditions for the staff. The number of operation theatres and staff will depend on the surgical teams.

The importance of the department of anaesthesia cannot be overemphasized. In addition to trained experienced anaesthetists for the surgical side, they will be needed for paediatrics and obstetrics and anaesthesia. Due to the paucity of qualified anaesthesiologists, nurse anaesthetist assistants are being trained in many countries and the experience has been found to be rewarding. The number of nurse anaesthetists will depend on

the number of surgery and delivery rooms, the case load and the number of emergencies.

The department of physical medicine and rehabilitation is also essential in any hospital of size. It should have sections of physical therapy, occupational therapy, speech therapy, social service, vocational counselling, psychological service, rehabilitation nursing, prosthetic and orthotic devices and a records section with properly trained staff and aides.

Provision will have to be made for a dietary service with a qualified dietician, who with other skilled staff, will be responsible for storage, preparation and distribution of food for general dietary needs as well as special diets. Pharmacy service with a qualified pharmacist and medical technicians (dispensing) to ensure procurement of standard drugs and proper dispensing will be necessary. A central medical and surgical supply department or stores is also essential and responsible for collecting equipment and supplies distribution.

Another useful section of the hospital should be a library for the patients as well as the staff and nurses and for the maintenance of medical records. The value of a library in a hospital is stressed as a branch of therapy. A trained librarian with a good knowledge of books, a kind understanding of people and a liking for the work and who is physically strong is needed.

The hospital has to cater for the emergency services also. Good medical coverage is the backbone of a good emergency service with a casualty physician, a casualty surgeon and a team of medical officers, a nursing staff and receptionists. This department must be so organized as to satisfy the public demand, so that emergency services must appear to give what they expect rather than what they need. As the emergency services are complementary to inpatient care, the emergency department can be a vital unit of the outpatient department. It should not be taken as the accident clinic but should be the first choice for medical care of any kind as the public looks to the emergency department for instant medical care. The emergency department should be headed by the director of the outpatient department. The department should be equipped with lifesaving drugs, including blood and electrolytes for transfusions and other facilities for dealing with all types of emergencies and resuscitation of the patient. A well equipped operation theatre is also essential. The medical staff coverage should be sufficient to ensure that an applicant for treatment will be seen by the doctor with the least possible delay and a mechanism should exist whereby specialized service can be obtained as promptly as possible when needed.

The outpatient department has a special place in the planning and designing of the hospital. It provides medical care to a larger proportion of the population than other departments of the hospital and serves as a gateway to the hospital. It should have various sections such as medical, surgical, gynaecology, midwifery, ENT, eye, paediatrics, psychiatry, venereal disease, a dispensary, X-ray and clinical pathology. In bigger hospitals other narrow specialities should also be represented in the outpatient department. Professors and consultants may be made available on the staff of the outpatient department in addition to the medical officers. The introduction of domiciliary facilities should also be given due consideration. Domiciliary treatment under the supervision of the consultant and home nursing are likely to reduce the cost of medical care. A team of medical social workers will also be needed by the outpatients. The services of part-time and honorary consultants can also be utilized.

Paramedical personnel are needed in the hospital who may be engaged in: 1) curative work, such as operation theatre assistants, physiotherapy assistants and anaesthesia assistants, pharmacy assistants, dental assistants and nurses, 2) preventive work, such as sanitary inspector, public health nurses, lady health visitors, and 3) diagnostic work, such as X-ray assistants and technicians.

A laundry with an experienced manager is essential. He should have knowledge of manpower utilization, purchasing and hospital traffic on principles of automation.

A workshop with staff qualified on the mechanical and electrical side for repair of hospital equipment and economical operation of the plants is also a must.

In big cities with many hospitals, a central mechanical and electrical workshop and even a centralized laundry on the principle of cost accounting may be visualized.

The last but the most important pillar of efficient care in the hospital is the nursing facilities. A paucity of nurses is present even in more advanced countries. In the developing countries nursing care is hopelessly inadequate and conditions have further deteriorated, at least in Pakistan, by the flux of qualified nurses to the outside countries in the Middle East and even Great Britain and America. To meet the challenge, training of nurse aides is the answer. Training of male nurses is also being tried.

The nursing services shall comprise director of nursing or nursing superintendent, with nursing sisters, staff nurses and nurse aides. In big hospitals schools of nursing training

may also be established with properly qualified sister tutors and the student nurses can be utilized to economize for staff nurses who then take up the supervisory functions.

Frugal staffing for economy is really no saving. A higher expenditure on hospital personnel may be responsible for achieving a shorter stay per case in the hospital.

After general consideration a review of the conditions obtaining in Pakistan will not be out of place.

In the colonial days, the health of the people was not a right but a charity. On the gate of every hospital and dispensary were sign boards in the vernacular language which read: Kharati Shafakhana or charitable hospital. The staff was inconspicuous and the funds were meagre. Before 1922 the dispensaries were too few and sparsely situated in the rural areas. One dispensary for a population of two lakhs was supposed to be quite sufficient and the staff comprised one subassistant surgeon who was the licentiate in medicines, a dispenser, one bearer and one sweeper. Usually the budget allotment for medicines in the dispensary was up to Rs. 300 per year. In 1919 came the Montague-Chelmsford Reforms and some of the departments in the provinces were designated as transferred and were handed over to the native ministers. Health was one of the transferred subjects. About 375 dispensaries were constructed under this scheme sponsored by Sir Fazal Hussain, then Minister of Health Punjab. In every tehsil a hospital was constructed with eight beds for indoors, with one subassistant surgeon in charge of the hospital, helped by dispensers. These hospitals and dispensaries were mostly run by local bodies, namely the municipal committees and the district boards. The hospitals were gradually provincialized. In the provincialized tehsil hospitals assistant surgeons were appointed as in charge. The assistant surgeon used to be a medical graduate, usually with previous house experience. The hospital in the district headquarters had the civil surgeons as head with one assistant surgeon and one male and female subassistant surgeon to assist him. The civil surgeon was the inspecting authority for all the hospitals and dispensaries in the district. Grants for medicines at the district hospitals used to be about Rs. 2,000 per year. There was one teaching hospital at the provincial headquarters in the Punjab, viz. the K.E. Medical College, Lahore. There was no other medical college in the part that is known as West Pakistan at present. The provincial head of the medical department was the inspector general of the civil hospital.

On the preventive side there was no arrangement for the control of infectious and communicable diseases. The then Government of India was only forced to this aspect when cholera spread in some of the cantonments which had British Army people

stationed therein. A skeleton preventive organization was set up. In the Punjab, district medical officers of health were appointed by Sir Fazal Hussain. The director of public health was the provincial head of this public health department.

After independence there was a vacuum in the health and medical department. There were only eight district medical officers of health left for the 16 districts which came to Pakistan on partition. Immediate attention was further given to the production of doctors, nurses and other paramedical staff. The medical and public health departments were amalgamated in 1948 under the director of health services. By 1957 the acute paucity of medical staff had been substantially overcome. Five more medical colleges had been opened in West Pakistan and in East Pakistan and a post graduate Institute of Hygiene and Preventive Medicine was established in 1949 at Lahore to fill in the gap in the Public Health Organization. A 15-year plan was conceived which was to be implemented in three phases. The first phase was incorporated in the Second Five-Year Plan and it was started in 1960-61. One thousand rural health centres and 3,000 subcentres were stipulated in the scheme and a similar scheme was envisaged in East Pakistan. In addition to medical aid the scheme comprised steps for the control and prevention of communicable diseases, maternity and child welfare, general hygiene and a clean water supply. At this stage foreign advisors entered the picture and they chalked out preferences. After many years of pressure from the WHO, a Malaria Eradication Programme was started. The then Director General Health, Colonel Jaffar, did not agree but ultimately the Malaria Eradication Programme was taken up as it had the backing of the United States also and aid was offered in the form of a loan. Meanwhile a U.S. loan-aided family planning programme was also brought to the forefront. The major portion of the allocation in the Health Budget was spent on these programmes and the rural health centre programme lagged behind. The original 15-year health scheme was supposed to be completed by 1974-75 but it is a sad fact that by now only 100 rural health centres have come up with the tehsil and district hospitals as referrals. The Malaria Eradication Programme was to be completed by 1974. More than Rs. 25 crore have been spent on this programme but malaria came back last year in full swing. The Malaria Eradication Organization put forward a new scheme for the next seven years at an estimated cost of Rs. 106 crores.

The bulk of our population, i.e. about 85 percent, lives in the villages. Therefore, the importance of rural health centres comprising both curative and preventive care cannot be overemphasized. The present rural health centre has one medical officer, one woman medical officer, one rural health inspector, one lady health visitor, one dispenser, two dressers, one laboratory assistant, one nurse dai, and one sanitary patrol. This

rural health centre has three subcentres each with a rural health inspector, nurse dai and sanitary patrol.

The present government has put forward an ambitious and comprehensive People's Health Scheme with the following tiers:

- 1) Basic health units
- 2) Rural health centre with 10 beds
- 3) Tehsil hospitals with 60 beds
- 4) District hospital in each district with 250 beds or above.

The staff is shown in Table 3 and yearly requirements are shown in Table 4.

Teaching hospitals attached to the medical colleges will have 800 to 1,000 beds. Special institutions shall be set up for each of the following fields. The function of the institute shall include advanced treatment and training of concerned staff, basic and applied research in the field.

- 1) National Communicable Diseases Control Institute
- 2) National Cancer Institute
- 3) National T.B. Control and Research Centre
- 4) National Mental Diseases Institute
- 5) National Leprosy Research Institute
- 6) National Cardio-Vascular Research Institute
- 7) National Institute of Physical Medicines and Vocational Rehabilitation
- 8) National Nutrition Institute
- 9) Post Graduate Medical Research and Training Centre.

Crash programmes such as family planning, smallpox, and malaria eradication are supposed to be integrated into the general health services.

A word about contingent staff comprising bearers, ayahs and sweepers will not be out of place. The cleanliness of the hospital depends upon the working conditions and facilities provided to this staff. Ample staff should be provided so that no more than eight hours duty from the staff is required. Better living conditions will lead to better patient care. But there is no justification for trade union activities in the hospitals. These activities have turned the hospitals into factories under the purview of industry and created so many administrative problems that patient care has actually deteriorated.

Table 3. STAFFING PATTERN

One Basic Health Unit for Each Union Council

BHU	Doctors	1
	Hakim	1
	LHV	1
	Midwife	1
RHC	Health technicians	2
BHU	Sanitarian	1
	Family planning staff	2
	Other staff	2

One Rural Health Centre Town Health Centre for Every Fifth Union Council

RHC	Doctors	2
THC	Hakims	2
10 beds	LHVs	22
	Family planning officer	1
	Midwives/Naids	4
	Sanitary inspectors	2
	Technicians	3
	Other staff	10

One Tehsil Hospital for Every Tehsil/Taluka

Tehsil Hospital	Specialists	5
60 beds	Doctors	10
	Dental surgeon	1
	Nurses	12
	Midwives/Naids	15
	Sanitary inspectors	4
	Other staff	60
	LHVs	3
	Radiographers	2
	Pharmacist	1
	Dispensers	3
	Technicians	15
	Administrative staff	8

One District Hospital for Every District

Specialists	15
Doctors	30
Dental surgeons	4
Nurses	50
LHVs	6
Midwives/Naids	86
Physiotherapist	1
Dispensers	6
Administrative staff	21
Other staff	156
Radiographers	6
Pharmacists	4
Technicians	39

Table 4. YEARLY REQUIREMENTS

	Total Requirements						Available					Additional Requirements
	BHC (3,364)	REC (709)	TH (154)	Dist. Hgr. (44)	National Institutes	Total	BHC (1,511)	REC (95)	TH (83)	Dist. Hgr. (44)	Total	
Doctors	3,364	1,418	1,870	967	89	7,708	832	181	159	206	1,378	6,330
Dentists	-	-	217	149	-	366	-	-	-	35	35	331
Clinical specialists	-	-	635	607	68	1,310	-	-	-	257	257	1,053
Public health specialists	-	-	362	245	-	607	-	-	-	51	51	556
Lady health	3,364	1,418	435	237	-	5,454	104	88	-	144	336	5,118
Nurses	-	-	1,524	1,858	173	3,555	-	-	-	372	372	3,183
Pharmacists	-	-	127	149	-	276	-	-	-	-	-	276
Sanitary staff	3,364	1,418	562	736	-	6,080	-	-	-	-	220	5,860
Technicians/ dispensers	6,328	2,836	2,521	1,396	331	13,412	1,511	176	332	378	2,397	11,015
Radiographers	-	-	254	228	29	511	-	-	-	44	44	467
Midwives/nurses	3,364	2,856	2,013	3,145	-	11,378	1,475	154	-	226	1,855	9,523

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THE EDUCATION AND TRAINING
ON MIDDLE MANAGEMENT
ON THE JOB DEPUTATION
TO OTHER INSTITUTIONS --
WITH PARTICULAR REFERENCE
TO AUXILIARIES

by

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INTRODUCTION

Pakistan during the past 25 years survived the most crucial phase of its existence. Never before has a country met with so many hazards and uphill tasks so soon after its birth as Pakistan, but passing through all the vicissitudes and withstanding the jolts heroically, she has finally emerged as an habitat of an invincible nation.

Today this country is well poised for developmental progress and is set on a path of revival of its glorious heritage. The need for an integrated social and economic development was never so acute before as it is today, its principal objective being the improvement of the general level of its people.

The role of human capital in the development of a country is of fundamental importance, and the quantity and quality of its output is the determining factor. It is manifest in the achievement of:

- 1) Improved human welfare
- 2) Increased productivity.

This is precisely the reason that planners at the national as well as provincial levels have paid special attention to this vital aspect which is well reflected in various plan allocations. Today Pakistan is set to the task of self-governance through a democratic institutional framework as well as building up a viable economy. There is a growing need to define and redefine the national goals, fixing priorities and devising a sound mechanism of planning and its implementation. The administrative machinery has to be geared afresh to meet the new needs and to tap the inner potential of the people. The implementation of these phased developmental programmes thus implies a closely-knit organisation and coordination which brings in its wake the subject of management.

Management as it is understood today is distinct from its colloquial connotation. In fact, management existed as long ago as the Old Testament and Moses at least was conscious of the need of an administrative hierarchy through which authority could be delegated and be managed on what is now termed as "exception principle." Coming nearer to our own times, management has opened many vistas of vision and it is a vast field ranging over an enormous variety of institutions such as business concerns, trade unions, government departments, hospitals, universities, etc.

The word management or administration is supposed to encompass a great variety of activities, from highly technical scientific processes of the modern hospital to the equally complex psychological and sociological problems of welding a heterogeneous group of individuals into a working team, united in the fulfilment of the goals of an organisation.

The speed and the tempo with which technological, social and economic development is advancing has brought an element of sophistication into management and has become the focus of a growing volume of research. According to one writer, Cobe

(1946), there are three distinct phases in the evolution of administration and he terms them: 1) empirical, 2) rational and 3) cognitive.

The first is the traditional type, the so-called amateur administration, consisting largely of a pragmatic rule-of-thumb method, handed down from our predecessors and modified crudely in the light of experience.

The second is better known as scientific management, concerned mainly with the application of more sophisticated techniques of administration such as work study, budgeting, planning, etc.

The modern administration has, however, entered the third, or cognitive phase, wherein the emphasis has shifted from the application of sophisticated methods and techniques to the application of the demands which a highly dynamic environment places upon the administrative unit. Here a line of delineation is drawn between business management and hospital management in that so far as the hospital or medical practice supplies a service to the sick rather than products to the healthy, and does so without the stimulus of market pressure, the importance of the humane aspect of hospital administration is much more obvious than business management.

MIDDLE MANAGEMENT DEFINED

Before I make an attempt to define middle management within a hospital, it would be worthwhile to give very briefly the concept of hospital management. As Captain J. E. Stone put it, "A hospital is at once an hotel, an industrial plant and a college." Its clientele are persons who are for the time being abnormal in mind and/or body. It has a wide contact with the public and its personnel include individuals who vary from charwomen to cultured professional women and from labourers to highly specialised scientists. Hospital administration, then, is a most exacting calling, demanding that those who follow it hold fast to the profession of their faith without wavering. It is not an emergency landing field for failures in other lines of business nor is it necessarily a convenient pigeonhole for service pensioners and retired civil servants.

Anyone who is conversant with the fundamental principles of modern business is convinced that this modern age is the age of specialisation. This is the trend of the century. There is an increased demand for higher education in all fields quite commensurate with the march of progress. Along with it has grown an

awareness of prompt and efficient hospital treatment for the sick. These factors and the changing needs and demands of the society have transformed our hospitals from boarding houses for the sick to institutions with highly specialised departments. The modern hospital, therefore, has to be an educational institution besides being a carehouse for the sick--and it is precisely due to this factor alone, achieved through its outpatients and social service, that it has a respectable status in the community. This is why the hospital as a complex speciality must impart training in principle and practice of administration.

THE HOSPITAL AS AN INDUSTRY

Let us view a hospital from a different angle, i.e., in the searchlight of industrial experience--the hospital becomes an industry just like any business enterprise where every tactic and characteristic approved for an industry is equally applicable to the hospital, rather much more, because (as has been rightly remarked by a writer) hospital administration calls for a finesse of leadership unrivalled in any other field of endeavour. The hospital commodity is a unique professional service and its patrons--physically abnormal humanity--are not a commodity that people come to buy, wrapped or packed and carried away, but a medical practice that supplies service to the sick. In other words, here emphasis is principally laid on more human considerations than a business administration. It has a dual task to treat--to serve the sick and educate the public. The latter must be taught that the modern hospital is not a pest house, a place of last resort, but rather a centre disseminating life--a place where they may avail themselves of the latest in costly scientific equipment designed to promote and preserve that most precious asset--health.

MIDDLE MANAGEMENT

This general description of hospital administration and management naturally leads to a discussion on how this fits into the theory of middle management in hospitals, to be examined in the light of systems in which hospital services are governed and provided.

The administration of an enterprise is the top control and the chain of command leads down through various levels to the level of production. It is a pyramidal structure to some extent and at the lower level becomes departmentalised. Parallel to the administrative chain, there are professional, technical

and scientific chains which cross connect at each level. The top of the pyramid is a specialised type of administration with a complete administrative structure or a policy implementation machinery. In the analogy of a hospital, the top crust consists of an administrative head (heirarchy of administration) and a heirarchy of professional and scientific advisors. The middle level just above the base of the pyramid is what can be called the *middle management* level, as it is here that the governmental machinery on the one hand filters and on the other sublimates all development activities. Naturally, the top management must find means of keeping themselves concerned or knowledgeable. Having done so, should they be strengthened themselves to do work that falls on middle management or should their function be reduced and greater responsibility be given to middle management through what is termed delegation of functions?

This is a revolutionary idea, but as Mary Parker Follet, who challenged the conventional idea of authority being derived from position in heirarchy, said, "Authority should go with knowledge and experience--that it where obedience is due, no matter whether it is up the line or down the line, where knowledge and experience are located there you have the key man of the situation."

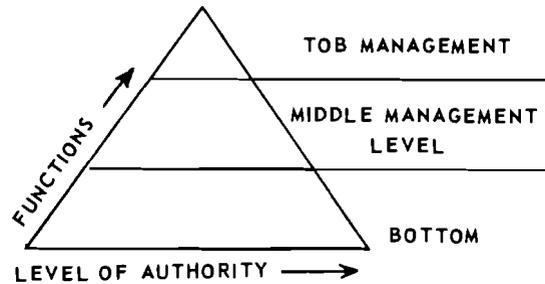
Theoretically speaking, an organisational structure has three pillars:

- 1) Specialisation
- 2) Chain of command, divided vertically by the principle of specialisation and
- 3) Span of control, i.e., there is a definite limit to the number of subordinates that can be effectively controlled by one superior.

This division into various compartments needs direction, coordination and control and it is this chain of command through which authority flows. Middle management thus falls into the third compartment.

ADMINISTRATIVE PYRAMID

These three simple notions can be represented graphically by a pyramid, vertical divisions representing functions, and horizontal ones representing level of authority.

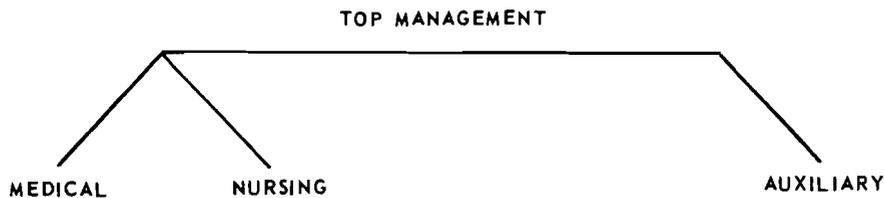


The more the delegation of authority, the larger the pyramid--the greater the extent to which decisions taken at the top can be converted into standing orders, the more obtuse the angle at the apex of the triangle--the more the efficiency of the organisation depends on the personality and work of the chief executive, the more acute the angle.

Again, the narrower the span of control, the longer the administrative distance, i.e., the dimension on a vertical axis between the point of decision and point of action.

Thus middle management in this pyramid would mean widening the span of control and narrowing the administrative distance which results in a more flexible organisation.

Coming back to the middle management on an individual hospital level--the system depends on three broad compartments and may be termed a tripartite arrangement:



This implies, therefore, that independence of these separate elements to apply their professional skills to individual patients must be preserved. In other words, their professional activities cannot and should not feel directly the weight of bureaucratic control. This divides the organisation into three tiers:

- 1) Professional section headed by a specialist
- 2) Nursing headed by a matron and
- 3) Auxiliaries.

They all pool their resources but operate on a personal basis subject to little direction from without as to change of function or organisation.

I have given a broad concept of middle management and neither time nor space permits me to encompass each category of middle management. The term has to be restricted to one important compartment of the pyramid, the auxiliary. This is precisely due to the fact that medical services in developing countries should be organised from the bottom up and not from the top down. Stress on suitably trained auxiliaries can be more productive and beneficial than what can be obtained from expensive ill-staffed hospitals with glittering facades--particularly if they do not undertake any training. In ordering priorities, trained men and women come before bricks and mortar and a multitude of competent auxiliaries before a multiplicity of specialists.

Moreover, the role a doctor has to play in developing countries is different in a variety of ways than his counterpart's industrial one, because here a doctor has to act as a teacher, an organiser, a supervisor and a consultant to the team of auxiliaries. The education and training, therefore, primarily refer to auxiliaries.

What is an Auxiliary?

According to the definition of the World Health Organisation: "An auxiliary is a technical worker in a certain field with less than the full professional qualifications." They have to be distinguished from those having attained an accepted level of a code of discipline. In this dichotomy of professional workers two grades distinctly appear to be senior grade, based on a university degree, and junior professional and paramedical grade. The former includes doctors, the latter nurses, laboratory technicians and pharmacists. Both of these are quite familiar but the third--the unfamiliar ones--are auxiliaries. They are sometimes referred to as assistants, too, but in practice they more often substitute for rather than assist a professional person.

Again auxiliaries have another classification--single-purpose and general-purpose auxiliaries. The former have a minimum education or none at all, trained for a single skill or a limited range of skills, e.g., i/v injections only or aspirating a lymph node, though they do play their part, too, but it is the general auxiliaries who are trained in a variety of skills. Actually, they fill in the gap even in highly developed hospitals

between those highly skilled and the least skilled. Therefore, it is doubtful if they will ever become redundant.

The true classification is extremely difficult (for example, in Indonesia there are as many 44) but they are based on three factors:

- 1) Basic educational level
- 2) Speciality and
- 3) Length of their vocational training.

Based on this, the auxiliary may be: 1) senior, 2) middle and 3) junior, a continuous flow of skill from the top to the bottom of the ladder.

The Scope of the Auxiliary

To quote an example as to the scope of an auxiliary, an orthopaedic assistant can be of singular importance in a district hospital, particularly in this age when trauma occupies about two-thirds of the admissions in the surgical wards. A well trained orthopaedic assistant in such a hospital can be more adept at practical procedures than even an average doctor, e.g., assistants trained in plaster of Paris techniques, assistants trained in the technique of elevation of limbs and of balanced traction, and knowing how to use traction appliances accordingly. Assistants trained in physiotherapy, the use of radiant heat and massage must also know how to teach the patient the fundamentals and elementary techniques of exercise such as the use of quadriceps, hip, knee and ankle joints. Assistants trained in the use of calipers in measurement and adjustment particularly for cases of poliomyelitis, should be trained to know the main muscles acting and assessing their power--the muscle chart. Assistants should be trained in the treatment of diseases of bones and joints--arthritis, telepes, sciatica, nerve injuries, etc.

Just imagine the multitude of cases of injuries pouring into the trauma wards of the hospital and a single surgeon handling them. There may be many crippled temporarily or permanently who need the assistants much more than the doctors. By organising these assistants into a team, doctors, however few they may be, are spared for principal traumatic surgical intervention and the assistants can be entrusted with the more common day-to-day manipulation procedures--the principle of doing the maximum with minimum resources.

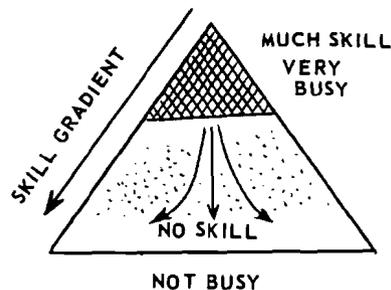
Education and Training of Auxiliaries

Theoretically speaking it is the bounden duty of a medical superintendent, whether he be the only doctor or one of sev-

eral, to keep a close vigilance and accept responsibility for everything that goes on around him. Naturally in such circumstances he cannot effectively control unless he parts with some of his powers. Delegation of powers is said to be the key to administrative success. The maxim in this respect is to delegate tasks even to the humblest member of the team provided he can do the job satisfactorily.

A medical assistant trained in lumbar puncture will relieve a doctor to do something else, just as a deputy trained in routine administrative matters can relieve the administrator of a lot of petty matters. Delegation and training are thus inextricably linked.

Richard Manche has described what he termed a "skill pyramid."



Writing in a book edited by Maurice King he explains this pyramid to be composed of the staff of a hospital, with very skilled people at its apex and many pairs of unskilled hands at the base. Each of its layers is proportionately related both in quality and quantity to the work the unit is expected to do. This forms a skill gradient which passes from a heavy top, consisting of a conglomeration of skilled persons, down to the scanty bottom, consisting of comparatively idle hands--in terms of personnel, from the doctor through medical assistants down to the sweepers. This apparently uneven gradient can be made more even and uniform by continuous teaching. These had to be (to borrow again from Richard Manche) a constant striving "to push tasks down the pyramid." They will relieve the congestion at the top to a great extent. A doctor must be continuously teaching his sisters and medical assistants (in return learning from them also). They in their turn must teach the ward naids and boys, dressers and the whole staff must teach the patients also.

Every hospital does have a handful of experts or skilled personnel. Others are recruited afresh--they may be unskilled or semi-skilled. Such people need training--the only way to

train them is through on-the-job training on inservice training and the only people to train them are doctors, sisters, etc. In a busy hospital, however, the doctors and sisters may not find sufficient time to teach, i.e., "no time with which to save time," but with even a little teaching and a little delegation a beginning can be made towards a satisfactory equilibrium.

There are three prongs to the spear of the teaching endeavour:

- 1) Individual teaching
- 2) Group teaching
- 3) Self-teaching by the staff.

Individual teaching is invaluable. This should be supplemented by group instruction and at times teaching aids should be used. This should be part of the hospital routine. The third prong of the spear is composed of books and it must be ensured that suitable books are made available to those who seek knowledge.

Despite the complexity of this pattern and despite difficulties, the continuous process of teaching should still be the ultimate goal of a good hospital. In fact a medical student after graduation must consider himself to be a teacher as well. After all, the word doctor--derived from the Latin "docere," meaning to teach--does in fact mean a teacher.

As regards training patients, there should be a training school in every district hospital. The idea should be to train all grades and as many as possible--the enrolled nurse, the public health man, the enrolled midwife or better still, a comprehensive nurse who is a combination of all. There is a considerable demand for such personnel in hospitals, health centres and child welfare clinics. The training and discipline equip them fairly well to be an asset to their society. In fact they are so comparatively inexpensive that a district hospital should be considered incomplete if it does not have a training school. For training sister tutors, however, training schools should be a national priority.

Certain standards must be maintained and every pressure to lower these standards must be resisted. Some sort of a syllabus must be approved, an examination system of candidates must be evolved and if possible a certificate issued to the successful candidates on the completion of this curriculum. This certificate should form the basis for better remunerations and emoluments. To motivate this learning and training a salary increment may be given. This should be nationally recognised for uniformity of standards, besides being approved in individual hospitals.

This brings us to the last part of the subject--job deputation to other institutions, which in fact cannot be done unless job analysis and job specification are considered. A hospital has two essential types of employees:

- 1) Those working with people
- 2) Those working with material.

The job classification of each hospital employee depends upon whether the emphasis is placed on (1) or (2). Every employee must be matched with a particular job. This needs a careful and scientific study of the job and the employee. Those well versed in personnel management have set out three characteristics of the employee--capacity, interest and opportunity:

- 1) By capacity we mean a worker's inherent interest and innate assets and how far they can be developed, depending upon education, training and skill.
- 2) By interest we mean the worker's likes and dislikes and his capacity to adjust and adapt to his co-workers.
- 3) By opportunity we mean stage for future development, which is more or less specific for each job. If the job does not offer such an opportunity to the trained or skilled worker, the job will be a blind alley for him and he will be a misfit.

This concept of capacity, interest and opportunity necessitates:

- 1) Careful analysis of each job's exact duties, working conditions and human capacity
- 2) Further training facilities
- 3) Promotions and advancement.

In short, in the words of Tead and Mitcalf, "...the determination of the essential elements in the job and the qualifications a worker should have for its successful performance."

The next step is that of job specifications. This clearly delineates the exact duty or job description and minimum requirements for it, education, intelligence, skill, etc.

The advantage of the procedure is that the organisation is cognizant of exact needs and qualifications necessary for it. Optimum working conditions should also be detailed.

Having clearly programmed the jobs, a demand may be placed on institutions that can best supply these personnel.

In this way the task of job deputation to institutions requiring the services of highly skilled or less skilled and trained workers becomes considerably easier. The whole process must be continued for purposes of coordination through the genesis of employment exchanges or a cell within the ministry or department. The latter must receive the demands for workers from all institutions with a precise statement of job specifications. They should also have a detailed list of available personnel as well as the number of institutions offering training in a particular speciality.

A proper procedure can thus be evolved wherein such trained personnel can be deputed for work to other institutions. This will have a marked impact on the efficiency and scientific accomplishments of these institutions. But one can be wise only when knowledge gained by trial and error is revised and revived.

*Knowledge is proud
that it has learnt so much
Wisdom is humble
that it knows no more.*

THE LOAN SCHEME IN IRAN --
A DEVICE FOR
A BETTER DISTRIBUTION
OF PERSONAL HEALTH SERVICES

by

*Dr. A. Nili Aram, Dr. K. Majidi,
and Dr. H. Ghassemi,
Tehran**

INTRODUCTION

The principal aim of the Iranian health planning effort has been the provision of a balanced and graded range of personal and public health services for the urban and rural populations throughout the country. Considering the geographical and demographic characteristics of Iran, such an endeavour would be a tremendous challenge to any health delivery system.

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The country's 30 million people¹ are scattered over an area of 164,800 square kilometres of difficult mountainous terrain, providing an average density of 18 per square kilometre with regional variations of 60 for the Central Province to 215 for Sistan.

About 60 percent of the population live in 66,000 villages, each with less than 5,000 inhabitants. Over 55,000 of these villages have less than 500 people.

Apart from such demographic, geographic and physical barriers which hamper the direct provision of personal health services, the rural areas and some small urban communities also lack the economic capacity to create market mechanisms so that they can attract and absorb their share of health services.

The result is that in spite of nearly two decades of endeavour in health planning and the effort to provide physicians, outpatient hospital services for the small towns and their satellite villages and despite the great progress made in this direction, there is still a great imbalance in the services of large cities and the small towns and rural areas. Of the total of 10,262 physicians and dentists in the country in 1972, over 52 percent of them were in the Central Province. About 67 percent of all the specialists in the country were in Tehran and the rest were in larger provincial capitals.

The distribution of beds follows a similar pattern. In 1972 in the Central Province there was one bed for every 357 people; in six provinces there was one bed for 500 to 999 people; in eight provinces one bed for 1,000 to 1,500 and in six provinces one bed for 2,000 people and over.

Such a concentration of doctors and beds in the large population centres is indicative of the clustering of other types of health manpower and facilities in these areas. In order to remedy this situation, Iran's health planning effort has employed some orthodox ways, such as systematic increases in the number of principal and supporting health manpower and facilities and their steady if somewhat slow dispatch to remote areas. But apart from this straightforward technique, Iran has adopted some original and innovative schemes which have had considerable shortcut effects in the effort to expand health services. The most important of these moves are: 1) the Act of 1965 to hand over the government hospitals to the people, 2) the creation of

1. The figure 30 million is for 1972. It is calculated on the basis of the 1966 national census with a rate of 3.2 percent annual increase.

the Health Corps, and 3) the loan scheme which will be the subject of this paper.

THE LOAN SCHEME

Through the loan scheme the government gives loans to private professional groups. Loans may comprise as much as 95 percent of their investment to construct and equip private hospitals.

The scheme serves several objectives concurrently. Firstly, according to the law of 1965 the government was expected to hand over the responsibility of the management of most of the social services to the people. During the implementation of the law in the Third Five-Year Development Plan it was realised that the private section of the health field could not expand quickly if there was no direct government support and direction. The loan scheme was then introduced in the Fourth Five-Year Health Plan to stimulate private enterprise in medical care and give it momentum and direction. It is now an established fact that private enterprise is by and large more efficient in the management of its services than the government. This is as true in the administration of hospitals as in any other private industry and commerce. One of the objectives of the loan scheme was to use such talents in the management of medical care services.

Moreover, the obvious economic benefit to the government should not be overlooked. Whereas previously the government had to carry the burden of full investment and the running cost, with the implementation of the loan scheme the government's share of the investment was reduced to an average of 90 percent of the total investment which is also returnable and the running cost was completely lifted off the government's shoulders.

Secondly, this was a device which tried to encourage investment in the deprived areas by the introduction of a number of benefits in the scheme so that very "easy" loans with an interest rate of as little as one percent and a period of payment as long as 20 years were considered for far-off areas, gradually becoming "harder" for the more well-to-do areas, the highest interest rate and the shortest payment period having been considered for Tehran.

Thirdly, by the encouragement of the formation of basic specialty groups composed of general surgery, medical, obstetrics and maternity specialties for the provincial districts, and more advanced types of specialties, such as heart and thoracic surgery for provincial centres and the capital, a balanced and

graded network of interconnected basic and super specialties would eventually result, starting from ambulatory outpatient and basic hospital care in districts, progressively going to more specialised care in the larger population centres.

And last but not least, the loan scheme was intended to remedy the common malady of most of the developing countries which has come to be known as the "brain drain" by helping young physicians and specialists, graduated in Iran and abroad, to set up practices in their own country, by helping them in the stage of initial investment and assuring them of a high income.

The Main Features of the Loan Scheme

An examination of all the varied points in the regulation of the loans would be lengthy, but the main features can be conveniently classified under the following headings, especially chosen to show significant properties of the scheme.

Devices to Regulate the Distribution of Hospital Services

Various articles in the law and its accompanying regulations are meant to encourage investment in hospital construction away from Tehran and large provincial centres. The first point is that loans in Tehran and a radius of 50 kilometres around it should not exceed 60 percent of the total investment in each case, and that the total amount of loans given during the plan period should not exceed 20 percent of the total loan allocation. Provincial centres, too, will not get more than 30 percent of the total loan allocation of the plan period.

The second point is the large percentage of loans for the deprived districts, which can be as high as 95 percent of each investment.

The loan terms for different areas are as follows:

	Rate of Interest and Commission (in percent)	Repayment Period (in years)
Tehran	4	10
Provincial capitals	3	15
Districts	1	20

Terms to Encourage Efficiency in Hospital Construction and Management

In order to speed up the process of planning, construction and equipping hospitals and preparing them for quick utilisation, a maximum period of three years is allowed from the time of signing the loan contract to the time of payment of the first instalment.

To make the members of the investor teams concentrate all their attention and ability on proper management of their hospitals, it is stressed that all the members must give their full time to the running of their hospitals and that they cannot have any other jobs in governmental or nongovernmental hospitals.

Design of a Graded Network of Medical Care Services

In order to have a gradation of services starting from basic ones and progressing to specialties, the law provides that the minimum number to form a team of investors eligible for loans at the Shahrestan (district) level would be three doctors, one of whom must be a general surgeon. Such a group would be allowed to construct general hospitals of 50 to 75 beds.

Each team in provincial capitals or other large cities, must have at least 10 specialists in surgery, medicine, pediatrics, obstetrics, anaesthesia, X-ray, laboratory and others. For Tehran this number is fixed at 15. Such numbers of specialists would be required for hospitals of 100 to 150 beds.

Maintenance of Business with a Social Aim

To keep the hospitals established on the loan scheme in business and assure them of a steady income, it is laid down in the loan regulations that in each of these hospitals a number of their beds will be appropriated for the admission of patients who are unable to pay the hospital cost, and that the Health Department of each district will pay the full expense of their treatment according to agreed rates, which will vary from area to area.

Such hospitals can also admit patients of the Civil Service Insurance Organisation and the Farness Insurance Organisation with full reimbursement of their fees.

A Self-Perpetuating System

To make the scheme into a self-perpetuating system, it is provided that the money received from repayment of the loans and their interest be again given for further loans to more medical teams.

Mechanism for the Determination of Eligibility

A committee composed of five members, two representing the Ministry of Health, two representing the Plan Organisation and one physician from the Tehran Health Council, was set up to carry out the scheme with the following duties:

- 1) To investigate the applicant's professional and legal eligibility and to decide on priorities
- 2) To approve the loans
- 3) To approve the time limit for the start of utilisation
- 4) To investigate noncompliance with the terms of the contract.

The Loan Scheme at Work

It is too early yet to evaluate the scheme as to the degree with which it has achieved its goals. But in spite of its slow start and rather unsteady development it seems to have all the signs of success, although it is easier to enumerate problems and bottlenecks at this stage.

Of the total of 4,000 beds planned through this scheme during the period of 1968-72 (inclusive), loans for the provision of a total of 1,985 beds have been granted. This figure represents roughly about 50 percent of the total and may be taken as an indication of a rather hesitant start.

One reason is that the actual granting of loans started rather late, i.e., towards the middle of the five-year period of the Fourth Plan. Other points will be mentioned later.

Of the 1,985 beds, 695 beds, or about 35 percent of them are in Tehran and the rest are mainly in provincial cities or the larger towns.

There is no doubt that the scheme is sound in principle and very well received by the interested groups. The amount of requested loans at present by far exceeds the available allocation.

The hesitant start and lack of progress in the needy and originally intended areas is due to the same factors which have hampered some of the other plans designed to solve the problems of maldistribution of personal health facilities plus some particular problems of the scheme. Briefly these problems are:

- 1) Lack of eligible professional groups in far-off provinces
- 2) Inability of some interested groups to provide their share of the intended investment, which is 10 percent of the total investment
- 3) Lack of full knowledge of the loan scheme by eligible medical individuals, especially Iranian doctors living abroad
- 4) Lack of full knowledge of the economic potential of isolated communities and their ability to meet their medical expenses
- 5) Deficiencies of the law and problems of its implementation.

The first four points are self explanatory. On the last point these remarks can be made here.

The scheme being a new one, the Ministry department which was put in charge of its administration did not have previous experience, especially in evaluating and assessing proposals since no attention had been paid to the drawing up of standard criteria models to act as the tools of assessment. Consequently, hospital plans were received which were either too ambitious, costly or defective. There were numerous examples of imbalances in each building plan or an unproportionate mix of services. For example, small hospital plans would have extravagant CSSDs or none at all. In practice it was found that in order to make the scheme successful and establish a speedy procedure for dealing with proposals, detailed standards for buildings and equipment of different sized hospitals were necessary.

Such problems were carefully analysed in the Ministry of Health in order to find ways to improve the scheme and remove all the bottlenecks. Apart from a series of reforms in the management of loan requisitions, it was decided to stop the construction of small hospitals in the Fifth Plan. According to the new Five-Year Development Plan, only hospitals with 300 or more beds will be supported through the loan scheme. This decision is based on the fact that small hospitals, whether public or private, cannot be managed economically and are not capable of providing first class quality care.

On the other hand, larger hospitals can have a full range of modern diagnostic facilities and the necessary spacial-ist manpower in order to provide good quality care. Added to this is the progress made in land and air communication in the country so that the great majority of the population have easy access to the major population centres. With the rapid expansion of insurance coverage large hospitals will not have any problem in getting enough patients. Therefore, the new conditions of the loan scheme will be geared to the policy of the Fifth Health Plan which calls for the construction of large well equipped and well staffed regional hospitals.

THE TRAINING OF
HOSPITAL ADMINISTRATORS
IN THE SCHOOL OF PUBLIC HEALTH,
TEHRAN UNIVERSITY

by

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INTRODUCTION

The purpose of this presentation is to introduce the programme of Hospital Administration in the School of Public Health, Tehran University and its development to date.

The objective of this course is to train hospital administrators in order to have trained, skilled hospital administrators with scientific and technical qualifications based upon both academic knowledge and practical experience, so that hospitals throughout the country may be properly and efficiently administered.

A substantial amount of public money is spent annually on hospitals. According to our health plans, the number of hospital beds is systematically increased all over the country year by year.

At present there are approximately 519 hospitals with a total number of 42,500 beds throughout the country.¹ Some of these hospitals are large with as many as 500 beds and the most expensive and up-to-date facilities, but the administration of most of these hospitals had been a cause for great concern. Inefficient management practices and an ill equipped administrative organisation of these hospitals is the source of a great amount of waste of scarce resources. The malfunctioning of hospitals is not only significant from an economic point of view, it is also an inhibiting factor in the application of rapidly progressing medical knowledge and technology.

The medical staff of our hospitals have for many years gained a high degree of specialisation in Iran and abroad, which necessitates a thorough change in organisational structures in hospital and the application of modern management skills in order to bring hospital administration on terms with the new advances in medicine.

With some variations in different health agencies, the majority of the hospitals in Iran are run by medical directors, who also have a department or clinic in that hospital, and probably a private clinic outside the hospital. With no special training in the skills of management on one hand and not enough time to devote to the improvement of the administration of hospitals on the other hand, they find themselves unable to properly manage such institutions.

The number of physicians in the country is approximately 10,000 and with the physician population ratio one in 3,000, it is evident that there is a shortage of medical manpower in the country. Therefore, the devotion of medical skill and knowledge to administrative work is a serious drain on our medical manpower resources.

The necessity to improve this situation was felt in the initial stages of health planning in Iran, particularly during the Second Seven-Year Plan. Subsequently, steps were taken to introduce training schemes and academic courses for the preparation of well qualified hospital administrators.

1. Not including hospitals provided for the armed forces, the police and the gendarmerie.

DEVELOPMENT OF A HOSPITAL ADMINISTRATION COURSE IN IRAN

This course was established in the School of Medicine according to an agreement signed between the University of Tehran and the Ministry of Health in July 1961. This course grew out of experience gained in conducting shorter courses in the same field in the Ministry of Health since 1956. After the establishment of the School of Public Health in 1966 the course was transferred to this school and reorganised according to the rules and regulations of graduate programmes of the University.

The valuable technical assistance of the WHO and CENTO through the assignment of short-term consultants helped to improve the programme and to promote the standard levels of training of hospital administration.

The course received the scientific suggestions and assignments partly from the School Council, School of Public Health, Tehran University, and partly from the following consultants:

- 1) Mr. Sheldon A. Miller, Senior Health Officer, USOM course coordinator, 1956-57
- 2) Dr. Donald Macmillan, Director of Nuffield Centre for Health Services Administration, Leeds University, England, during a visit to Tehran from 20 April to 6 June 1965
- 3) Mr. Lavand Syverson, WHO Advisor, a short visit in 1966
- 4) Mr. Arthur Hurst, CENTO Advisor in Hospital Administration in the School of Public Health, senior lecturer of Nuffield Centre for Health Services Administration from June 1967.

POST GRADUATE COURSE OF HOSPITAL ADMINISTRATION IN TEHRAN UNIVERSITY, SCHOOL OF PUBLIC HEALTH

This is a two-year course consisting of three semesters of full-time academic studies and eight months of residency in some approved hospitals.

Requirements for Admission

This programme is offered to the holders of:

- 1) B.A. or B.Sc. degree or higher, from an approved college or university in Economics, Accounting, Education, Psychology, Biology, Social Sciences, or Health Sciences²
- 2) Graduates of the School of Administrative Sciences and Business Management
- 3) Graduates of approved medical schools, or dentistry or pharmacy. The number of applicants is increasing every year (Table 1). The number of applicants is approximately 80 (Table 2).

Selection is made by entrance examination and interviews.

At present, because of the limited number of hospitals which are suitable for field training, only 15 to 20 students are admitted to the course.

Requirements for the Degree

During both the first and the second academic year, the student is expected to complete successfully a total of 32 units in addition to 11 units of prerequisites, if necessary, to participate in supervised summer field work, and also to spend the fourth semester in practical hospital experience as an administrative resident.

Passing the comprehensive examination and writing a thesis is required for a M.S.P.H. Degree in Hospital Administration.

The Curriculum

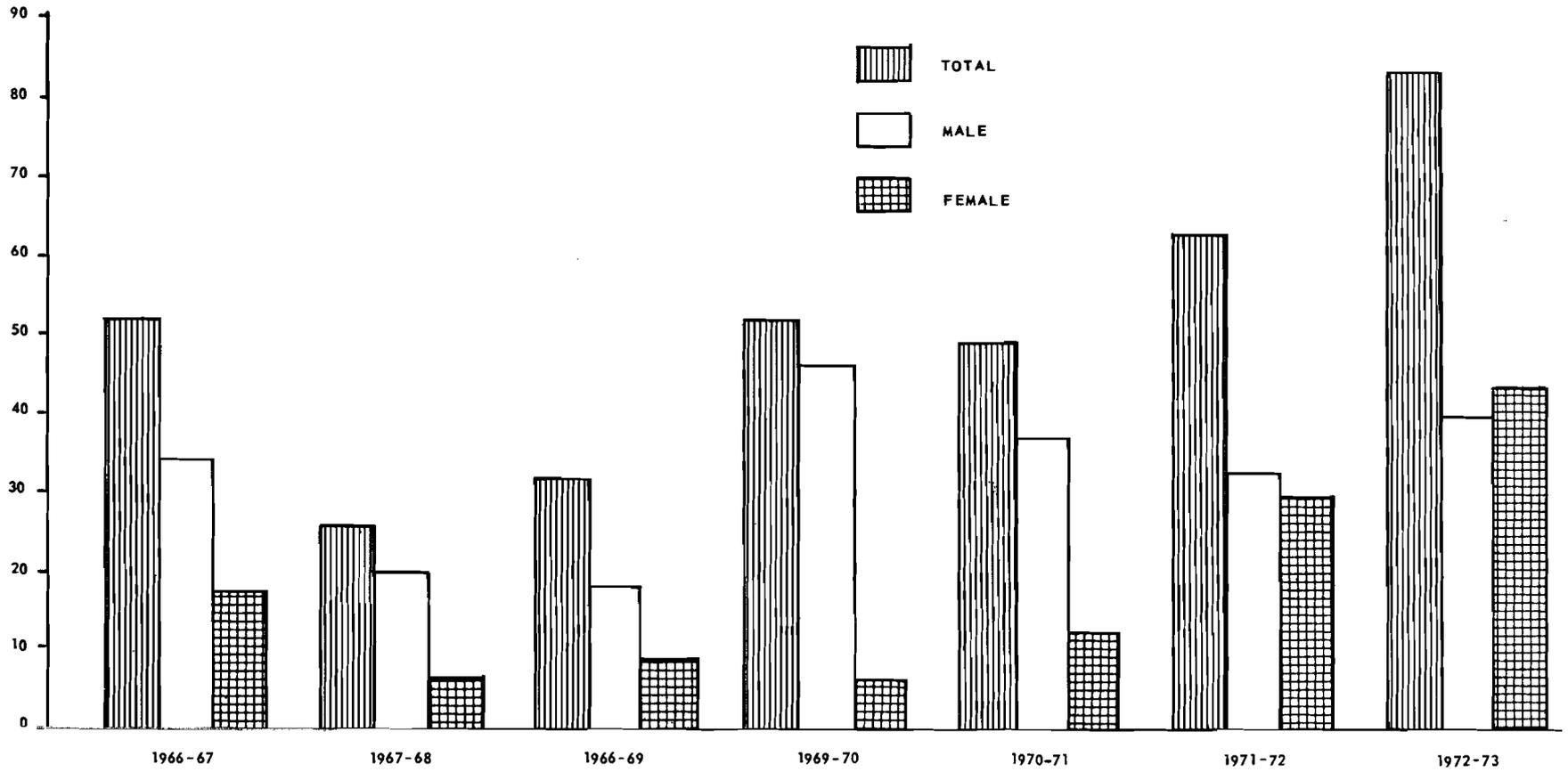
The first academic year is designed for basic public health and general administrative subjects.

During this period the student is also acquainted with the theoretical aspects of hospital administration.

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2. For the first two years nurses were also admitted to the course but due to the severe shortage of such staff it was decided not to admit them so that they would not be diverted from their own professional fields.

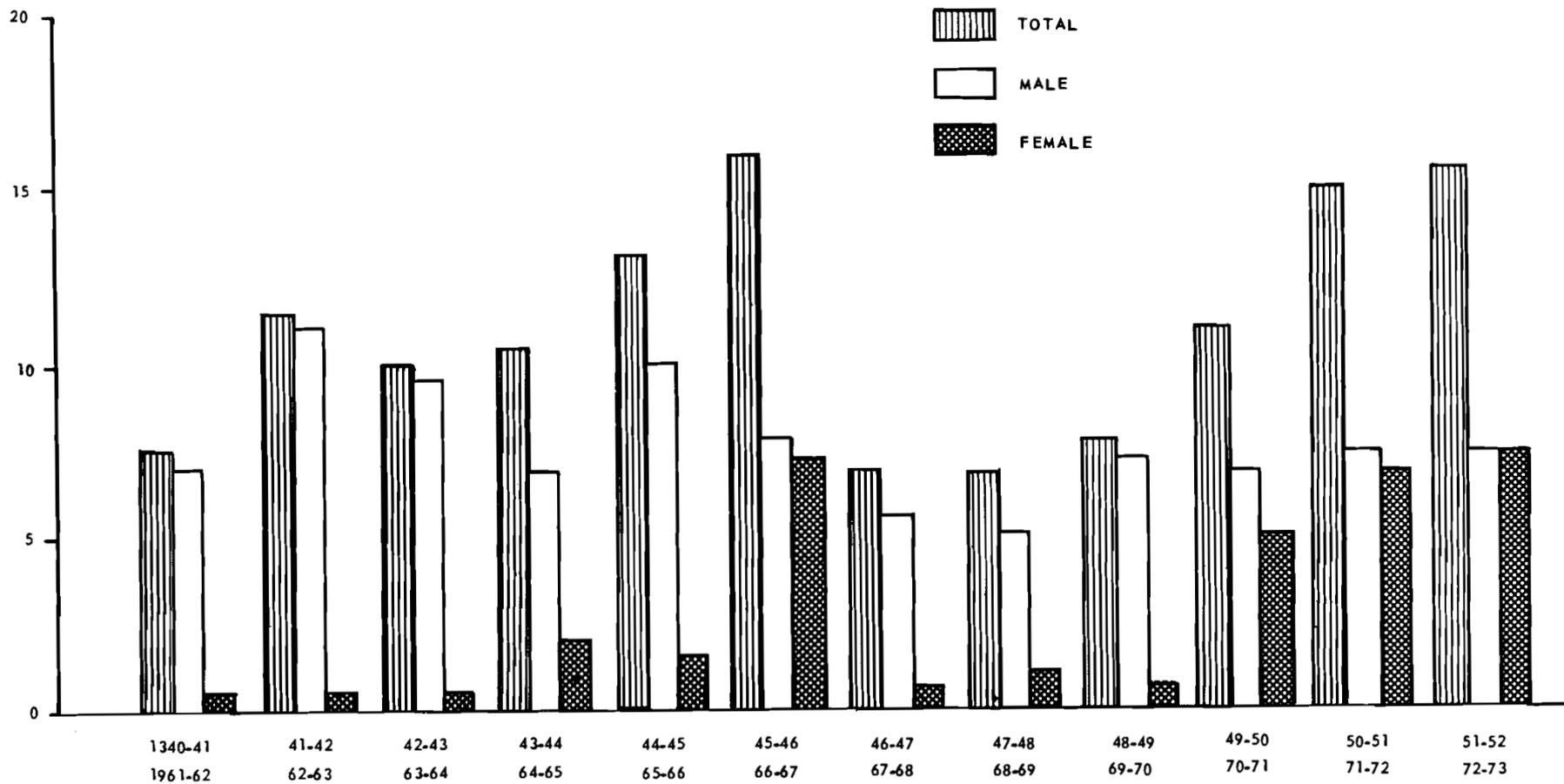
TOTAL NUMBER OF APPLICANTS FOR M.S.P.H. COURSE IN HOSPITAL ADMINISTRATION
FROM 1966 TO 1973

Table 1



159

Table 2
 SELECTED STUDENTS FOR M.S.P.H. IN HOSPITAL ADMINISTRATION
 FROM 1961 - TO - 1973



1/60

The second year is designed for the special subjects of hospital administration and for the residency programme.

The following courses are offered in the first year:

<i>Prerequisite Courses</i>	<i>Units</i>
Public Administration	1
Principles of Accounting	2
Medical Information (Parts I, II)	3
Bibliography and Research Methods	1
Foreign Language	4

Required Courses

<i>1) General Public Health Aspects</i>	<i>Units</i>
Biostatistics	3
Epidemiology of Communicable Diseases	2
Public Health Administration	2
Environmental Sanitation	2
 <i>2) General Aspects of Administration</i>	
Organisation and Management	2
Personnel Management (Part I)	2
Human Relations in Administration	2
 <i>3) Special Aspects of Hospital Administration (Part I)</i>	
Hospital Organisation and Management	2
Medical Care Administration	2
Hospital Accounting	1

The following courses are offered in the second year:

<i>Special Aspects of Hospital Administration (Part II)</i>	
Medical Records and Hospital Statistics	2
Hospital Planning and Development	2
Hospital Paramedical and Technical Services	2
Hospital Supporting Services	2
Personnel Management (Part II)	1
Hospital Case Study	1
Hospital Economics	2

FIELD HOSPITALS

The following hospitals administered by the University of Tehran, Ministry of Health, and other health agencies, have

been used for training purposes and residency upon mutual agreement:

<i>University of Tehran</i>	
Pahlavi Hospital	Tehran
<i>Pahlavi University (Shiraz)</i>	
Nemazi Medical Centre	Shiraz
Saadi Hospital	Shiraz
<i>Ministry of Health</i>	
Firouzgar Medical Centre	Tehran
<i>National Iranian Oil Company</i>	
N.I.O.C. Medical Centre	Tehran
N.I.O.C. Medical Centre	Abadan
<i>Imperial Foundation for Social Services</i>	
Ramsar Hospital	Ramsar
<i>Red Lion and Sun Society</i>	Tehran and Tabriz
<i>Social Insurance Organisation</i>	Tehran
<i>Isfahan University</i>	
Soraya Medical Centre	Isfahan
Khorshid Medical Centre	Isfahan
<i>National University</i>	
Jorjany	Tehran

At the end of 1972 the total number of graduates from the Hospital Administration programme had reached 107. From this total 48 were active as hospital administrators, 16 as assistant administrators, and 31 were in jobs outside the field of hospital administration (See Table 3).

Table 4 lists the numbers of graduates and their educational background. Although the percentage of those from the field of language and literature is the highest, this is now changing and in recent years no more students with a degree in language studies have been accepted. Therefore, there are more

entrants from the fields of public administration, accounting and the social sciences.

DISCUSSION

Despite the significant accomplishment of the Hospital Administration course in Iran, and academic advances in all parts of training, some problems still persist.

Basically there are two interrelated problems with regard to the course.

One is the problem of selection of suitable candidates and the development of a suitable training pattern with subjects relevant and applicable to the particular situation of our country. And the second is the problem of the graduates' work in the real world of the hospital in responsible positions, their acceptance by the health system and their ability to make significant contributions to the administration of hospitals.

Table 3

PRESENT POSITION OF GRADUATES OF M.S.P.H. IN HOSPITAL
ADMINISTRATION
(1961 - 1972)

	No.	%	Male	%	Female	%
Hospital administrators	48	44.9	41	49.3	7	29.2
Assistant administrators	16	14.9	12	14.4	4	16.7
Jobs other than Hospital Administration	31	29.0	21	25.3	10	41.7
Teaching of Hospital Administration	2	1.9	2	2.5	-	-
Studying abroad	7	6.5	5	6.0	2	8.3
Deceased	3	2.8	2	2.5	1	4.1
Total	107	100	83	100	24	100

Table 4

GRADUATES OF M.S.P.H. IN HOSPITAL ADMINISTRATION
ACCORDING TO THEIR PREVIOUS EDUCATIONAL BACKGROUND
(1961 - 1972)

B.A. or B.Sc. in:	No.	%
Language and Literature	38	35.5
Humanities	18	16.8
Doctor of Medicine	13	12.1
Sciences	13	12.1
Accounting	6	5.6
Nursing	5	4.7
Doctor of Dentistry	4	3.7
Law and Economics	3	2.8
Doctor of Pharmacy	1	1.0
Nutrition	1	1.0
Business Administration and Management	5	4.7
	107	100

Obviously the second problem is very much dependent on the first problem, i.e., with a good and progressive teaching and training programme, graduates will be equipped with the necessary skills, aptitudes and attitudes to influence the health system and make themselves not only accepted but sought after.

The problems of training come under three main points:

- 1) The first one is a proper selection method so that only those candidates who are intellectually suitable and are of the right disposition and character are chosen.
- 2) The second point is the theoretical part of the training which can only be improved when a suffi-

ciently large permanent full-time teaching staff is available, and particularly when enough relevant and appropriate texts in Persian are made available to the students, and when the students became accustomed to self-learning and a continual striving towards self-improvement.

- 3) The final point, which is probably the most important one, is the students' practical training in hospitals.

As far as the School of Public Health is concerned, much attention must be given the following points:

- 1) In practice the important factor in student residency training in hospitals is the degree of control and supervision by the hospital administrator over them. This is a particularly difficult issue since the hospital administrators' routine task of running the hospital does not allow enough spare time to see that the trainees are learning through their assignments to different hospital departments.
- 2) A better system of control and supervision will be possible if the students, administrators, and the departmental heads are aware of the importance of field training, and also by devising better programmes of specific tasks and jobs for trainees, to make a positive control system possible.
- 3) Currently there is a plan under consideration to have some qualified hospital administrators as associate members of the school, so that they can be paid a token salary while the students are under their supervision. It is expected that this may influence hospital administrators to take a more keen interest in the practical training of the students while they are attached to their hospital and feel responsible towards them.
- 4) Another way to improve the quality of residency work is to send the trainees abroad for work and training. Residency training abroad has always been favoured by the trainees and has been extremely beneficial in sharpening and broadening their interest and insight into the organisation and management of a hospital.

REFERENCES

1. General catalogue and announcement of courses, School of Public Health, Tehran University, 1970-72.
2. *Bulletine of Post Graduate Training in Hospital Administration*, Tehran University, March 1964 (in Persian).
3. CENTO Conference on Hospital Administration, Tehran, 1964.
4. Report to the Imperial Government of Iran on the Establishment of a Hospital Centre in the University of Tehran, Dr. Donald Macmillan, Director of Nuffield Centre, Leeds University, 1966.
5. Saroukhanian, G., M.D., M.P.H., "Need of the Middle East for Health Manpower," *Acta. Medica Iranica* Vol. XI, 1968.
6. Motameni, S.T., M.D., M.P.H., M.S.P.H., "Manpower for Medical Case and Health Services in Iran," School of Public Health, Tehran University, 1972 (in Persian).

MANPOWER MANAGEMENT IN A HOSPITAL SETTING

by

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Manpower is the most valuable and most expensive resource an administrator has, to deliver the services for which the organization exists. The effectiveness of this resource in accomplishing the hospital organization's purpose depends on the manner in which it is managed.

Manpower is people. It is the physician, the nurse, technician, clerk, and many others who practice skills essential to the healing process.

The hospital is a public institution--whether it is privately or governmentally run--because it serves a public purpose. Therefore, it is in the public interest to have good manpower management. Manpower is best managed when there are uniform policies by which we select, motivate, develop and advance people.

Manpower management policies can be influenced by political and economic considerations, although certain underlying purposes need to be satisfied. Among these are:

- To hire and keep a hospital career force of high competence and character.
- To foster in the work force an attitude of responsive service to patients.
- To make wise and economical use of available manpower.
- To provide a work environment which stimulates initiative, imagination, productivity, personal development and efficiency.
- To treat employees equitably and fairly; to help them achieve personal satisfaction and pride in their work; and to advance their opportunities for career advancement through training and utilization of their abilities.
- To maintain a high reputation as a health provider and as an employer.
- To allow development of a high order of professional competence and create a favorable climate for practice of progressive medicine by physicians and other professionals.
- To enhance organizational effectiveness through skilled management practices and supervisory proficiency.

This paper will not attempt to describe in detail the manpower management policies appropriate for a given hospital setting because there are variables in basic laws, governmental systems, cultural considerations, etc. Rather, we will examine some of the more pertinent and timely issues in managing health manpower with particular focus on some of the critical factors which today seem to be causing the most concern.

While the nature and quality of personnel policies can advance or inhibit an organization's goals, totally effective health manpower management is directly influenced by (among other things) the nature of the organizational arrangement, the quality of managerial talent, the supervisory pattern of leadership, and by the flexibility of career systems.

ORGANIZATIONAL ARRANGEMENTS

Most hospital organizations today follow a traditional pattern fashioned after the military concept of grouping functions according to specialization and homogeneity of skills. There is usually a vertical line or pyramidal type of authority from the lowest level through each echelon to the organization manager. This arrangement has served to define rather specifically the main functions of the organization (surgery, medicine, psychiatry, outpatient, etc.) as well as the supportive roles (nursing, food service, medical records, housekeeping, etc.). It has brought us the blessings of specialization and with it a high degree of expertise. Under this concept the primary responsibility for care of the patient is left to the physicians of a service. On the other hand, he must rely for help on many other skilled persons over whom the physicians have no direct control. As supportive services become stronger and their role becomes more sophisticated, we have noticed a trend toward demand for more autonomy in meeting the patient's needs. Also, as supportive roles become more prominent there is increased pressure for commensurate status and recognition. Over a period of time, the sum of these factors tends to erode the concept of coordinated effort toward meeting the patient's needs. Instead we have what appears as a series of independent, uncoordinated efforts toward total patient care.

Among the highly skilled, competitive professionals the results of this can sometimes be devastating to morale, good manpower utilization, organizational harmony, and ultimately to good patient care. Some way must be found to harvest the fruits of specialization in hospital organization without suffering the disadvantages of fragmented effort in care of the patient.

A model is sometimes offered of the physician as the sole master and coordinator of all care rendered to or for the patient. This has been found to be pretty much a myth. He cannot be expected to know enough in all supportive disciplines to personally direct all services rendered. Further, this would be an unnecessary drain on his time and might be cause for a most autocratic approach in management of other professionals. Yet, some means must be found to avoid the fragmented approach we seem to apply in delivering health care in the traditional hospital organization.

It has been suggested instead that we test a pattern of organization which groups all manpower necessary to accomplish a major function under the head of that function. Therefore, as an example, a nurse assigned to a surgical service would practice that professional skill as a team member of the surgical service rather than as a member of the nursing service. Theoret-

ically, the nurse would thus be totally responsive to the treatment philosophies of the Chief of Surgery while remaining an independent practitioner of the science and art of nursing. Perhaps in this manner we might achieve a truly cohesive effort in patient care where co-equal practitioners of various skills work as a team under a head who acts more as a coordinator.

Organizational alignment of health manpower has a profound effect on the utilization, effectiveness, sense of well-being, and pride of identification of such manpower. The manner in which hospitals are organized is undergoing critical review and experimentation as the problems we have described with traditional organizations become more obvious.

THE QUALITY OF MANAGERIAL TALENT

The head of any health enterprise must first be a skilled manager. He must know how to balance limited resources (including manpower) to achieve desired goals. He must have knowledge of sophisticated management principles of the day and be able to translate these to help meet the needs of his hospital. He must be motivated toward a pursuit of excellence not only as relates to the goals of his hospital but as pertains to his own performance. He must have those personal qualities of integrity, good judgment, humaneness, commitment, perceptiveness, and intelligence as will make him a respected and credible leader.

It might be suggested that the leader we have described is a rare bird, indeed. We submit that the patients who are served and the employees who are governed deserve nothing less. Managerial power can be awesome when related to the effect of seemingly routine decisions on the lives and well-being of individual human beings.

Managerial competence is acquired through well planned preparation. The process of enhancing managerial skills is a continuous one. Those who have the good fortune of formal preparation to perform hospital administration have an advantage but this does not necessarily guarantee continuing competence. Those without formal preparation have a more difficult task but they too can develop competence.

Effective management of health manpower requires an awareness that such a management responsibility requires skill and that such skills require continuing updating and refreshment.

It is a basic right of those affected by managerial action to expect competence; it is a responsibility of the manager to acquire and/or develop such competence.

The best development is self-development. This suggests that the manager of health programs be a self-critic and a self-developer. Organizations can and should provide opportunity for development of managerial skills, but capitalizing on and expanding such opportunities is very much a personal matter.

The quality of managerial competence in a hospital is critical to effective manpower management. Such competence cannot be decreed by appointment or assumed by possession of another professional skill. It is a specialty in its own right and competence in the specialty must be acquired and developed.

In hospital administration we seem to suffer from a peculiar notion that once careful selection is made of a top executive, his success or failure thereafter is accepted as a fatalistic, uncontrollable phenomenon and not as a predictable and controllable result.

We also fail in how we evaluate the performance of our top managers. Very often vague and subjective criteria form the basis for judging their competence. The development of competence and allowing for growth can only result from careful assessment of current performance. This assessment can be even more meaningful if the criteria for measurement can tie individual performance to organizational effectiveness. These are distinctly measurable elements. For example, an evaluation finding of serious backlogs in radiology work might lead to a conclusion of poor manpower distribution in the organization. This weakness, on analysis, may be attributed to lack of managerial skill in financial management, to lack of control mechanisms, or to the question of middle management competence. Such findings, if consistently noted in the organization, are good indicators of managerial weaknesses which are correctible with appropriate developmental activities.

Not all developmental effort need be related to evaluative findings. New management theories, current research findings, and changing organizational program emphasis are continuing facts of organization life with which top managers need to concern themselves. Added to this is the need to reinforce and refresh well established facts of managerial knowledge to sharpen managerial competence.

It is the height of organizational folly to assume that the top hospital executive, once in his position, is presumed to be fully qualified to carry on the responsibilities of the job. A continual learning process is properly to be expected and

should be provided for. Evaluation of performance by objective means leads to developmental activities which keep hospital administrators in top form to practice the most modern and progressive management skills.

THE SUPERVISORY PATTERN AND LEADERSHIP

Maintaining a proper balance of numbers of supervisory persons in the hospital is one of our greatest concerns. It is not uncommon to find hospitals practicing extremes in supervisory patterns--too many or too few. Hospitals are blessed (or cursed) with persons in the work force representing skills from the highest to the lowest. Little wonder that the hospital is considered to be one of the most complex of organizations to manage. Yet, we often overlook the pattern of supervision and the quality of supervision as a means of coping with this complexity. And, in the management of health manpower, this is perhaps one of the more neglected means for developing organizational effectiveness.

Until we reach that peak where a high sense of individual responsibility and competence permits each of us to work with others effectively in perfect harmony, and without direction, we will need supervision. We need supervision of a caliber and in the numbers as will get the work done in the best and least expensive way possible.

First, how many supervisors are enough? Certain management experts advance a concept that the ratio depends on the complexity of the work, the skills of the workers, the distribution of functions, etc., all related to the management principle of "span of control." Further, these experts state there must be a linking of various groups vertically and laterally in a fashion that enhances interrelationships to accomplish the hospital's goals. Therefore, to permit adequate control over the quality and quantity of work, and adherence to the standards and rules of the hospital, requires that each worker in the organization be supervised. How closely such supervision must be to the worker will depend on the nature and complexity of the work rather than on any given formula. Analysis of organizational performance offers a good clue to this question. The nature of most hospital organizations requires first level managers (direct supervision of the workers), middle line managers (supervision of programs or groups of functions), and top managers (having the broadest responsibilities).

The quality of leadership in the hospital, as in other organizations, directly affects the performance of workers. As we pointed out in our discussion of "managerial talent" the pa-

tients we serve and the employees we lead deserve competent, understanding and skilled supervisors. Unlike most other organizations, hospitals have a propensity for selecting supervisors who have achieved success in performance of technical skills rather than on the basis of supervisory preparation or potential. Perhaps this is unavoidable in selecting Chiefs of Surgery, Chiefs of Laboratory Service, etc., but the results can be chaotic to the management of health manpower and to hospital effectiveness if training of such persons does not take place early in his supervisory career.

What does a supervisor need to know to effectively discharge his leadership role? One need only examine the problems coming across the desk of the hospital's top executive to get some idea. Morale problems, patient complaints, interdepartmental strife, employee grievances, union pressures, and poor employee performance are all pretty good indicators of leadership deficiencies. A supervisor's understanding of and skill in motivation, communication, human relations, performance evaluation, work simplification, etc., are basic elements to the exercise of effective leadership. Such understanding and skill can be gained through planned activities within the hospital and through self-development efforts by the supervisor. But this can only happen if, as a matter of policy, the top executive declares high leadership competence as a hospital goal and sets the necessary mechanisms in motion to achieve this.

Continuing training programs for development of supervisory skills is important but sound and progressive leadership demands attention to the changing nature of work relationships and of new theories in social psychology.

As an example, recent research findings describe the effects of various leadership styles on employee sense of well-being and on performance. Supervisory understanding of these findings should be a high priority goal of the top executive and action should be taken to integrate such information as early as possible into the organized supervisory training program of the hospital.

To summarize, each of us in a hospital setting are affected, for better or worse, by the closeness of supervision and by the quality of such supervision. Hospitals have notoriously ignored not only the proven principles for proper grouping of employees to set supervisory patterns, but more seriously, there has been insufficient attention to development of leadership skill in those supervisors we have. Finally, if quality of leadership is a factor which greatly influences the delivery of good patient care, it ought to occupy prominently the attention of the hospital top executive both as to selection of persons to serve that role and in their development.

FLEXIBILITY OF CAREER SYSTEMS

We have compartmentalized health skills so well that if a deliberate attempt were made to find a system to "lock in" persons to a specialty, the health care system would provide the perfect model. A series of historical occurrences have established and perpetuated a process where people are educated to assume a specialized health care role under the assumption that this becomes an inevitable life-time role rather than as a possible foundation for broader roles.

A law school graduate is not taught to limit his horizons to the practice of law. He often turns to politics, considers himself qualified to enter corporate management, and to apply his skills to any variety of business ventures. It is not unusual to find a former teacher as a personnel manager, or a person prepared as an electronic technician doing quite well as a sales representative.

Practitioners of medical specialties rarely enjoy such mobility. As the saying goes, "once a nurse, always a nurse." How frequently do we see a pharmacist, physical therapist, radiology technician, etc., change career directions? It happens infrequently for several reasons:

- 1) Our health educational system concentrates, in most part, on the skills needed to do a particular health job. There is no common core of knowledge imparted which prepares the health technician for health careers in a broad sense, or to a career outside the health system.
- 2) Professional and technical organizations flourish by advancing the interests of a particular health specialty and by encouraging status and recognition within that specialty. Such goals do not encourage cross-specialty mobility. The selfish nature of such organizations tend to enslave a member within the confines of that specialty.
- 3) Pride of profession inhibits career mobility. It enhances a "picket fence" view of health careers with a number of separate "pickets" representing health careers, each separated from the other but loosely related to the whole. This frustrates persons in "dead end" positions and deprives the health industry of badly needed talents in other areas.

As we said earlier, there is merit in the concept of specialization but how do we equate this with the merits and

need for cross-mobility and fertilization? It is tragic to see a physical therapist or a pharmacist with years of preparation in his specialty unable to move from his career field to another without being required to go through the educational process completely, usually as a beginner, for qualification in the new field. There should be a reasonable and logical progression in transferring knowledge gained in one specialty to another specialty or to a totally unrelated field.

If we are to offer true career mobility to health workers and profit from the advantages of such mobility, it will be necessary to capitalize on the virtues of health specialization and yet, maximize the opportunities for career crossover. This will require a reassessment of health career systems and the educational process which prepares health workers. Health manpower should constitute a viable force for good patient care, so motivated by opportunity to expand health knowledge and mobility that entrance in a given specialty is viewed as a beginning in the field rather than as a career terminal--the end of the line.

SUMMARY

If, as we have suggested, the management of scarce health manpower in the hospital is a vital ingredient in the delivery of quality health care, it follows that those critical considerations which most affect the effectiveness of such manpower must be critically assessed.

First, we confirm the need for enlightened policies and practices in matters affecting health workers. Their special skills and selfless motivation in behalf of human suffering demands a high order of responsiveness to their interests by organizations.

Secondly, traditional hospital organization must be examined so that we can find some solution to the danger of strangulation by specialties and look for some means for achieving true team work in patient care.

Third, we must recognize that management of a complex organization such as a hospital requires special preparation and special skills. Persons advanced to such positions must possess the necessary personal requisites and motivations to self-development as will afford the organization the advantage of skilled and progressive leadership.

Fourth, of ever increasing concern is that there be proper distribution of supervision to assure proper performance by health manpower and that such supervision be performed by

persons skilled in all forms of leadership qualities to minimize organizational strife and ineffectiveness.

Fifth, health manpower must not remain in a "locked-in" status to an initial career decision. Means must be provided for easy movement from one career field to another, progressively or otherwise, so that there is open opportunity at any time, limited only by degree of motivation for change on the part of the health worker.

Finally, there is a never ending need to find better ways to get highly motivated, skilled, but individualistic health workers to form well coordinated health care teams--in the interest of integrated patient care. These are the challenges of the moment and the opportunities for the future.

PLANNING AND SCHEDULING OF MAINTENANCE

by

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INTRODUCTION

It is a real pleasure for me to be a part of a program which deals with the important and fundamental subject of maintenance. The maintenance function has always been vital; however, today more than ever before, we in hospitals and industry are rapidly mechanizing and automating our operations. This comes directly under and through your leadership.

I would like to give you some of my views and the thinking that I have used in developing our maintenance programs. I think maintenance, and the programming of maintenance, is almost a state of mind for the individual charged with the responsibility of conducting such a program. If the program is not important to the individual, it will become secondary, and the maintenance program will not develop. We have heard, through the years, that preventive maintenance is a most important function

in our profession as hospital engineers, and that we should be ever mindful of it. I have worked at several hospitals, and have found that the "maintenance programs" were often neglected, and there was very little semblance of a formal program. When I went to a new hospital several years ago, I decided that we should have a formal program, and that we should devote the energies that are needed to develop and conduct such a program. At the beginning this was an expensive thing to do, as it is to inaugurate any program. It required the services of at least three men for 18 months to do all the groundwork and to set up the program. I also decided to change the name of our preventive Maintenance Program, and today I like to refer to it as "Planned Maintenance." Planning signifies a settled objective and increases the suggestion of purpose. If something is planned for, it not only implies a high purpose, but also a higher probability of good results. This, in my opinion, is why it is important to associate planning and maintenance in order to more fully develop the meaning of a broad program, which is our objective.

IMPORTANCE OF MAINTENANCE

Let us see why a hospital director attaches such great importance to maintenance: In the first place, there is a large portion of the hospital's yearly budget involved. We were spending approximately one and one-half million dollars a year on maintenance and operation. I consider that a large expenditure, and in an area where we must strive to achieve maximum efficiency. Secondly, there is a direct relationship between planned maintenance and cost, which can be reduced if maintenance is dependable and good, or conversely, raised if maintenance is undependable and poorly planned. Looking at the question from another point of view, a poor maintenance program not only results in higher maintenance costs, but affects the operation of the entire hospital. Unless we can have dependable equipment and an efficient operating system, we cannot hope to serve our patients and satisfy the demands of the medical services. There are, of course, countless other reasons in your hospital, as well as mine, why management attaches great importance to planned maintenance, but I venture to say that if we followed any of these reasons to their source, we would find a direct relationship with the number of patients treated and the efficiency of the total operation. Therefore, as planned maintenance is directly related to the efficiency of the operation of the hospital, does this not seem to be an obvious answer to "why" top management should attach great importance to the field of maintenance?

EXPECTATIONS

What does management expect in the way of a Planned Maintenance Program? Above all else--personal leadership with the ability to create and develop programs to meet the needs of the hospital. No single factor is more important than personal leadership, whether it be in the field of maintenance engineering, dietetics, supply, or any other phase of hospital operation. Management expects planned maintenance leadership that sees the hospital's goal clearly, and appreciates the contribution that planned maintenance must make to serve the needs of nursing, dietetics, surgery, finance, personnel and supply. In addition to personal leadership, management expects a strong maintenance organization, because there are indications that maintenance employees may be a much larger percentage of our total employment in years to come. Management expects and deserves, at least in some cases, a change in attitude. We must stop thinking of maintenance as just a service, rather than a part of our total operation. This attitude breeds complacency. Our attitude must be that our maintenance will be effectively utilized and administered. Our attitude must indicate that we will not only accept, but encourage changes. This is necessary and fundamental! We must expect and require improvements. This is not a new attitude, because it is expected from others in our hospital. We must recognize that the need for change and improvement in maintenance will be far greater in the future than it has been in the past.

It was decided that while we were developing the method to be used in the formation of our Planned Maintenance Program, we would also develop a method to be used in the planning and scheduling of all our maintenance work.

We knew that the proper planning and scheduling was not taking place, that the Preventive Maintenance Program was suffering. The same old story of fighting fires, and we knew the only way planned maintenance would be put into effect was to establish a group who had the responsibility for developing and implementing the Planned Maintenance Program. It took a lot of time, and it took a lot of feeling our way into the program. There were false starts. We had to begin, go down the road a way, find out where we had taken the wrong turn, back up and start again; but in the long run, we feel that we have a program that will work, is simple, and will do the things that we want it to do. It has integrated all hospital equipment maintenance, planning and scheduling into one system. It has allowed us to use basic machine and accounting equipment to actually schedule our Planned Maintenance Program. It should be noted at this time that one of the hardest parts of the entire program was studying and thinking out the procedures to be developed. If you want to

develop a good program, you must be willing to spend time and allow the people to think their way through their problems logically, to reach practical conclusions, or you will not get the job done.

DEVELOPING THE PROGRAM

It takes time to develop a Planned Maintenance Program for a large hospital. We felt the best approach was to develop a program by divisions. In our basic planning, we decided to use the approach that the hospital was presently operating successfully under the Preventive Maintenance Program; that is, we would consider that there would be no need to upgrade our maintenance. We did this because we knew that even though we did not have a sophisticated scheduling procedure, the Preventive Maintenance Program had been handled by the individual maintenance shops. In other words, electrical shops did their work, plumbing shops did their work, etc. In our basic planning, we wanted to develop a program in which the procedure would be such that from the time a piece of equipment entered the hospital, until the time it was finally disconnected and sent to a scrap heap, it would be under a good Planned Maintenance Program. To do this, we felt it would be necessary for the work scheduler to be advised when new equipment was expected to be brought into the hospital. At this time, necessary motor-tag information and other machine-plate information would be taken from the equipment. The maintenance catalog would be studied, and the necessary frequency of preventive maintenance would be applied to that piece of equipment. This work would be done at the time the machine was initially installed. The first planned maintenance work would be done just prior to the initial operation of a piece of equipment. Quite naturally, the major part of our hospital and building service equipment was already installed. Our main job, therefore, was to perform a hospitalwide inventory as to location, type of equipment, etc. To take this inventory, we counted on the skill that we had at our disposal--mainly qualified mechanics. This task force recorded the information on data sheets prepared to receive this information. From these sheets forms were completed showing building number, building section, room number, etc., motor size, bearing size, belt size and other pertinent information that would be necessary to the maintenance of this equipment.

We felt that only with proper organization could we do the job required. One of the biggest problems we had to overcome was the custom of delegating maintenance to fill-in work. In other words, when we weren't too busy fighting fires, we did our preventive maintenance. Quite naturally this did not hold true 100 percent of the time, but many times systems and equipment being used were bypassed or neglected. We felt that it was very

important that planned maintenance work not be delegated to the role of stepchild in the normal maintenance program. We don't believe it should be interrupted by other maintenance work. We do not allow planned maintenance work to fall behind in order to take care of day-to-day problems.

We felt that the planning and scheduling of our equipment could best be done by the people who were going to fully implement the program. There is no better way to get a good program than to have the planning done by the men who are responsible for doing the work. One vital need in a Planned Maintenance Program is the need to interrupt recommended frequencies of inspection and preventive maintenance activities. Manufacturers, equipment suppliers, lubricant manufacturers, etc., are all very willing to tell you how and why equipment should be serviced. However, the frequencies that they recommended will vary from much too often to much too seldom. It takes a qualified, responsible, experienced maintenance man to determine the right amount of lubricant, based on his knowledge of the type of equipment, the type of bearing, location, atmospheric conditions, etc.

In our planning, one of the things we wanted to do was to help our maintenance people do a better job by eliminating as much of the paperwork as possible. Consequently, we investigated the various methods of proper scheduling of maintenance work. As you all know, maintenance can be scheduled on any series of dates throughout the month and any number of months throughout the year. We felt that we should have a program that would permit our planner-estimator to use the most modern techniques of handling paperwork in order to allow proper scheduling at a minimum cost. At first, we started with check sheets and tags on each piece of equipment, and the inspectors made out work orders. As the work orders were completed, the information was recorded on a machine record card, showing the amount of material and labor spent on maintaining all equipment. As we progressed, some 3,000 pieces of equipment in two different locations were found; it was advisable to use an automated system. The machine accounting equipment was available to us in our hospital, and came to be utilized, rather than having clerical help shuffle cards and maintain handwritten records.

Flow Chart on a Work Order

Work requests are received by the planner-estimator and all work orders are written by him. He gives each work order a number, an item number, and an account number. He also describes the work to be accomplished, including an estimated time of accomplishment. The work order can be a single or a multi-shop work order. All work orders go from the planner-estimator

to the section chiefs. Multi-shop work orders are sent to the section chief in whose shop the greatest portion of the work is to be performed. When a work order involves both sections, the section chiefs will review the work order with the shop supervisors, discussing their phase of the work, and give each shop supervisor a copy of the work order. Coordination of multi-shop work orders is done at this level. When the multi-shop work order leaves the section chief, it goes to the responsible shop. The other shops involved also have a copy of the work order. They review the work order, and make sure they have material on hand to do their portion of the work when it progresses to their shop.

The first shop listed on the multi-shop work order is called the responsible shop. This means that they are responsible for recording all material costs, indicating the time the work order is completed, and marking it completed. This is indicated on our Flow Chart by shops 01, 02 and 03. The line of communication shows the inside line going from the shops down to shop number 1, the responsible shop, showing the collection point of all the pertinent data on the work order. The work order is then returned to the responsible section chief, who reviews the work order and inspects the work. The work order is then returned to the planner-estimator.

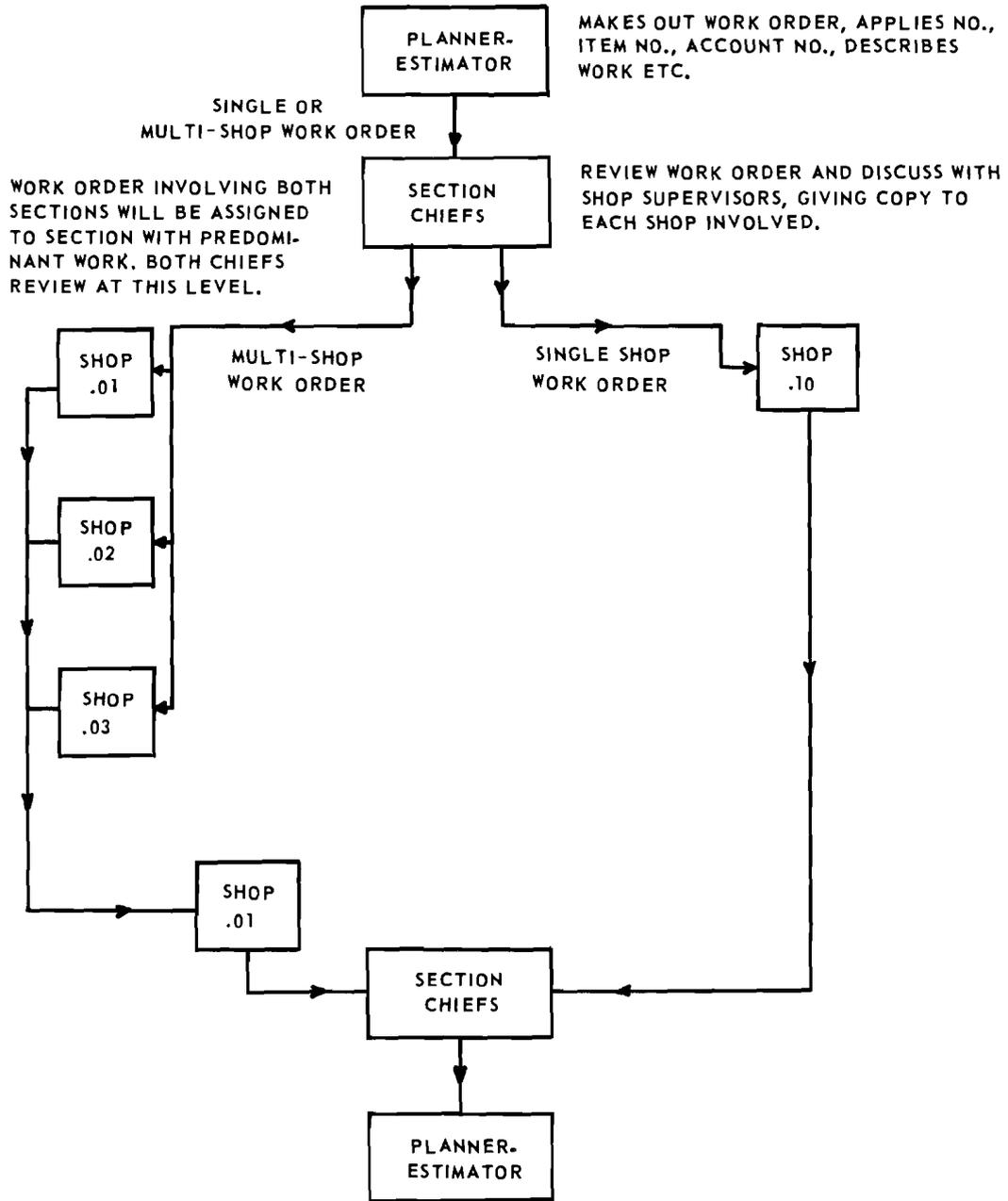
On a single-shop work order, as shown on the right side of our chart, the section chief again reviews the work with the shop supervisor involved. When the work is completed, the shop supervisor and/or his mechanics, who complete the work, will so indicate on the work order and send it from the shop to the section chief responsible for the work. The section chief in turn will return the completed work order to the planner-estimator.

OTHER ASPECTS OF THE PROGRAM

In our Planned Maintenance Program, the planning aspect brought out some very important points. It is important that maintenance people work very closely in order to logically evaluate the claims put forth by vendors of materials such as lubricants. The search into the quality and workability of materials, belts, fittings, etc., made up an important part of the planning function.

It was also decided, at this point, that we had to develop a thorough Maintenance Training Program. In maintenance, you need a particular type of mechanic, one who can be a specialist in a particular field such as electrical work, or air conditioning work, and also can be trained to do all the work involved on a particular type of equipment. Although we have

FLOW CHART



faith in the ability of our mechanics, it was felt that all of them would be better qualified to handle inspection and maintenance work through the development of training programs. We could then use different mechanics, rotating them through the different areas of the hospital, getting each one used to inspection work, giving him the opportunity to develop by experience along lines relatively unfamiliar to him. You do not want your top mechanics working on planned maintenance inspection. The repetition involved in the Planned Maintenance Program is tough on this type of person, because it is not enough of a challenge. You are better off with a general mechanic, someone who has a broad appreciation of mechanics and electricity, not a specialist such as an electrician or a plumber. While we did use various high quality people in the development of the program and the establishment of the procedures, we have found that a general maintenance repair man with a good background is very adaptable to this Planned Maintenance Program.

What results can we achieve? We should be able to cut down the number of work orders received. Personnel doing the work realize the task has been given to them. They do a good job, and we feel that it has increased their efficiency. The system assures that all equipment is checked and serviced more frequently than before, and that the useful life of the equipment is being extended. We are able to keep a watchful eye over all of our equipment at all times. The mechanics feel that they are responsible for keeping the equipment running. Consequently, they look at all the functions required to be serviced at that time.

We also supply ourselves with additional back-up material at budget time. For example, we are able to determine which pieces of equipment require more maintenance, indicating our need for more plumbers or electricians or air conditioning mechanics, etc.

As you may have decided by now, I am enthused about the Planned Maintenance and Scheduling Program. I feel that this is a valuable tool and an aid for maintenance engineering and good engineering management.

SUMMARY

How We Developed Our Maintenance Control Program or Planned Maintenance

The procedure to set up a proper maintenance system will vary from hospital to hospital, but this is how we did it:

- 1) Accumulated basic data on equipment to be included in the Planned Maintenance Program.

- a) We took inventory of all hospital maintenance and set it up on permanent records. Equipment data should be recorded and kept up-to-date on all equipment, giving motor size, horsepower, belt size, bearing size, etc. This data will be used in expediting work orders and letting the mechanics know ahead of time what size replacement parts to take, tools that would be necessary to accomplish the work, etc. This is also used in keeping replacement parts stocked as needed.
- b) We identified each unit with a permanent number. This was done at our hospital by determining the building number, building section, room number, description of equipment, and number of pieces of equipment, if there was more than one like item in the same location. This number will help to identify the equipment for all concerned, and gives the mechanic the exact location and identification when work is required on that piece of equipment. Each piece of equipment should be numbered, along with associated equipment such as dishwasher, soap injector and rinse injector.
- c) The extent of routine maintenance was determined, also what is expected and required by the manufacturer's data, how often it should be checked, lubricated, type of lubrication, and how much maintenance will be taken care of by inspectors.
- d) It was determined how the work, generated by the inspectors, would be accomplished.

While it takes only a few seconds to bring up these items that we have discussed, it requires a great deal of time to get them accomplished. Numbering the equipment and tagging it was quite a task. At this point we put our program on check sheets and allowed the inspectors to use check sheets and write work orders as indicated by the inspection.

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CENTO SECRETARIAT

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U. S. - FINANCED CENTO ECONOMIC PUBLICATIONS

- * 1. Seminar on Cattle and Sheep Breeding, 1959
- * 2. Seminar on Land Classification and Soil Survey, 1959
- 3. Seminar on Forestry, 1959
- * 4. Conference on Minerals, 1959
- * 5. Progress Report, Coordinating U.S. Action for CENTO, 1959-60
- * 6. Conference on Development Programming, 1960
- * 7. Symposium on Chrome Ore, 1960
- * 8. Conference on Teaching of Preventive Medicine, 1961
- * 9. Conference on Industrial Development Banking (1), 1961
- *10. Symposium on Coal, 1961
- *11. Progress Report, Coordinating U.S. Action for CENTO, 1961-62
- *12. Traveling Seminar for Increased Agricultural Production, 1962
- *13. Conference on Agricultural Development Banking, 1962
- *14. Conference on National Income Accounting, 1962
- *15. Conference on Development Planning, 1962
- *16. Conference on Teaching Health Centers, 1962
- *17. Conference on Industrial Development Banking (2), 1962
- *18. Conference on Establishment of National Scientific Organizations, 1962
- *19. Symposium on Industrial Rocks and Minerals, 1962
- 20. Seminar on Cost and Return Ratios for Major Agricultural Products, 1963
- 21. Conference on Teaching of Science, 1963
- *22. Symposium on Rural Development, 1963
- *23. Symposium on Iron Ore, 1963
- *24. Symposium on Consumer Expenditures, 1963
- 25. Conference on Agricultural Development Policy, 1963
- 26. Symposium on Management Training in Public Administration, 1964
- 27. Conference on Nursing Education, 1964
- 28. Conference on Hospital Administration, 1964
- 29. Traveling Seminar on Range Management, 1964
- *30. Conference on Manpower Needs and Training of Environmental Sanitation Personnel, 1964
- *31. Symposium on Mining Geology and the Base Metals, 1964
- 32. Traveling Seminar on Agricultural Credit and Cooperatives, 1964
- 33. Symposium on Industrial Statistics, 1964
- 34. Symposium on Scientific and Industrial Research, 1964
- *35. Second CENTO Veterinary Pathology Seminar, 1964
- 36. Symposium on the Role of Local Government in National Development, 1965
- *37. Symposium on Tax Administration, 1965
- 38. Symposium on the Development of Capital Markets, 1965
- 39. Traveling Seminar on Veterinary Education and Animal Health, 1965
- *40. Traveling Seminar on Fresh Fruit and Vegetable Marketing, 1965
- *41. Seminar on Field Techniques for Mineral Investigation, 1965
- *42. Progress Report, Coordinating U.S. Action for CENTO, 1962-65

43. Symposium on Hydrology and Water Resources Development, 1966
44. Conference on Land Classification for Non-Irrigated Lands, 1966
45. Symposium on Household Surveys, 1966
46. Summer Training Program in Geological Mapping, 1966
47. Traveling Seminar on Farm Tools and Implements, 1966
48. Symposium on Mine Health and Safety, 1966
49. Conference on Engineering Education, 1966
50. Conference on Agricultural Extension, 1967
51. Traveling Seminar on Processing and Marketing of Fruit and Vegetable Products, 1967
52. Summer Training Program in Geological Mapping, 1967
53. Conference on National and Regional Agricultural Development Policy, 1967
54. Symposium on Agricultural Statistics, 1967
55. Traveling Seminar on Marketing of Livestock and Livestock Products, 1967
56. Conference on Combating Malnutrition in Preschool Children, 1968
57. Symposium on Development and Utilization of Mineral Resources, 1968
58. Conference on Industrial Vocational Education, 1968
59. Conference on Earthquake Hazard Minimization, 1968
60. Report of the Ad Hoc Working Party on Fertilizers, 1968
61. Decade of Development, a Ten-Year Compendium, 1959-69
62. Symposium on Demographic Statistics, 1968
63. Progress Report, Coordinating U.S. Action for CENTO, 1965-69
64. Geology and Ore Deposits of the Lakan Lead-Zinc District, Iran, 1968
65. Symposium on Manpower Planning and Statistics, 1969
66. Conference on National and Regional Livestock Development Policy, 1969
67. Geology and Ore Deposits of the Sizma-Ladik Mercury District, Turkey, 1969
68. Conference Series on the Teaching of Public Health and Public Health Practice, 1970
69. Conference on Broadening Public Participation in Equity Investment, 1970
70. Traveling Seminar on Management and Financing of Marketing Cooperatives, 1970
71. Conference on Forestry Development Policy, 1970
72. Seminar on Veterinary Investigational and Diagnostic Methods, 1970
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74. Symposium on Price Statistics, 1970
75. Workshop Series on Clinical and Applied Research on Family Planning, 1971
76. Workshops on Marketing of Livestock and Their Products, 1971
77. Symposium on Central Banking, Monetary Policy and Economic Development, 1971
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83. Workshop on Educational Responsibilities of Nurses and Midwives in Relation to Family Planning in Maternal and Child Health Services, 1972
84. Seminar on the Control and Eradication of Viral Diseases in the CENTO Region, 1972
85. Seminar on Budget Administration, 1972
86. Highway Planning and Administration, 1972

* Out of print

The above list includes all publications financed by the Office of the U.S. Economic Coordinator for CENTO Affairs. Most of the older books are now out of print and are no longer available. However, copies of those still in stock may be obtained by writing to:

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