SPECIAL GROUP MEETING ON

MEDICAL EDUCATION

ALEXANDRIA, 16 - 20 DECEMBER 1963

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE EASTERN MEDITERRANEAN

ALEXANDRIA
UNITED ARAB REPUBLIC

1963

WORLD HEALTH ORGANIZATION
Regional Office for the
Eastern Mediterranean

EM/SP.MTG.MED.EDUC/8
EM/ED.TR/56
February 1964

ENGLISH ONLY

REPORT ON

SPECIAL GROUP MEETING ON MEDICAL EDUCATION

ALEXANDRIA, 16 - 20 DECEMBER 1963

NOTE The views expressed in this Report do not necessarily reflect the official policy of the World Health Organization.

PARTICIPANTS AND OBSERVERS WHO ATTENDED THE WHO SPECIAL GROUP MEETING ON MEDICAL EDUCATION HELD IN ALEXANDRIA UAR FROM 16–20 DECEMBER 1963

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

TABLE OF CONTENTS (Cont'd)

INTRODUCTION

The Conference on Medical Education in the Eastern Mediterranean Region sponsored by the World Health Organization, Regional Office for the Eastern Mediterranean, and held in Teheran, Iran, from 16 to 24 October 1962, resulted in the formulation of important ideas on medical education particularly as it pertains to this Region The report which summarizes the discussions has already been published and circulated. It has received wide acceptance by medical schools in the Region as well as institutions in distant countries. A complete report of the proceedings will be published at a future date

At the closing session of the Teheran Conference it was suggested that there should be another conference on medical education held by the Regional Office within a few years to assess the follow-up results. This suggestion, together with a feeling on the part of the Regional Office that the Teheran Conference had fully discussed the basic aspects and that more activities in the field of medical education sponsored by the World Health Organization are needed in this Region, brought about the idea of organizing an informal special group meeting in Alexandria in December 1963 A number of participating members of the Teheran Conference, all of whom were distinguished leaders in the field of medical education, were contacted and asked to take part in this Special Group Meeting Most of these educators were able to attend, however, a few were unable to come and conveyed their regrets.

Since most of the participants knew one another from the Teheran Conference and were fully familiar with the discussions that had taken place there, less preparation was needed than is customary. A few papers written by the participants, as well as the other background material that was circulated, appears in the following pages. The WHO Secretariat included two short-term consultants who took part in the preparations.

From the beginning it was thought that after the Meeting, the Group may be interested to visit one of the nearby medical institutions. The University of Assiut and its medical college was chosen for this purpose because of its location as it represents more of a university town than a large city, also because of the fact that it is a new and growing institution. The latter fact makes it more interesting for a group of educators to see the beginning of an institution which will hopefully become an important university.

The Meeting began on the morning of 16 December and ended in the afternoon of 18 December The discussions centred around the following major areas progress and developments since the Teheran Conference, important features and difficulties observed in the course of medical education programmes in the Region, inter-country and international co-operation in the promotion of medical education with particular emphasis on the rôle of the World Health Organization.

After the closing session, the Group proceeded to Assiut and were received as the guests of the University of Assiut until the afternoon of 20 December 1963.

Perhaps the most important concept that evolved during this Special Group Meeting was that the medical educators in this Region are very much concerned about the deficiencies of their contributions to the medical welfare of their respective countries. It appeared that the established schools as well as the new institutions, even with already great expenditure of money, time and energy were not meeting the medical needs of their nations to the full and necessary extent Whether this is true of the other areas of the world or not, it is clear that universities and medical schools may be able to materially augment their contribution in this respect by taking a fresh and unorthodox view of the whole problem of medical education. Obviously much planning, exchange of views, and experimentation are needed to formulate new methods. It was, therefore, suggested that the World Health Organization Regional Office, as well as the countries themselves should organize specific activities in support of these ideas This will hopefully bring about even closer co-operation between the medical schools as the producers of medical manpower, and the Ministries of Health as the consumers

CHAPTER I

SUMMARY OF DISCUSSIONS

1. DEVELOPMENT OF MEDICAL EDUCATION SINCE THE TEHERAN CONFERENCE, 1962

1.1. General Observations

The Teheran Conference has proven of great value not only because it took place at a time when numerous changes in the system of medical education of the countries of the Region were being contemplated and new undergraduate and post-graduate schools were under way, but also because it stimulated many medical educators to explore new areas of improvement. Last but not the least, it was instrumental in the establishment of contact between medical educators and the increase of regional co-operative ventures. Several national conferences have been held following the Teheran Conference leading to a better realization by the authorities concerned of the importance of close co-ordination in the planning of medical education and development of health services.

The Special Group Meeting had been planned as a follow-up of the Teheran Conference, with the particular objective of obtaining further advice on what should be done in the field of inter-country co-operation and more specifically on a definition of the rôle of the World Health Organization in this field.

The Regional Director in opening the Special Group Meeting emphasized these points after welcoming the participants and observers (List of Participants and Observers, Annex IV).

He stressed the importance of Education and Training programmes in general, and medical education and inter-country co-operation in particular.

The group then dealt with the specific features of development in individual countries in the Region as well as on the international scene.

1.2. Iran

The application of the recommendations of the Teheran Conference in 1962 was facilitated by the appointment of the Chairman of the Conference as Chancellor of Teheran University. The first endeavour was the preparation of a bill for University teaching staff which was ratified by the Council of Ministers in September 1963. This law provides for the full-time employment of teaching staff (specially of Basic Medical Sciences) and research workers, for the elimination of professorial chairs and their replacement by departmental organizations, prohibition of full-time professors to accept political positions without forfeiting academic status, changes in the methods of recruitment and promotion of young Iranian scholars, the appointment of deans, etc.

This law is already implemented in all five State University Medical Schools under the direction of the central inter-University Council which attempts to enforce the observation of minimum standards of medical education. The Teheran School of Medicine has reduced its enrolment during the academic year 1963-64 from 350 to 250, twenty-two departments being formed by the integration of sixty-two existing chairs.

The organization of post-graduate education has also been revised In addition to the twenty-seven medical subjects in which medical graduates could enrol and specialize, a new post-graduate programme in public health is planned to be started in 1964 for which the assistance of WHO has been requested

Efforts are also made in all Government Medical Schools for the institution of the following improvements, some of which are already in full swing

(a) giving responsibility for the planning and control of expenditure to the departments based on an established budget;

(b) modifying methods of instruction and placing more emphasis on independent reading, research, discussion and less on rote memorization;

(c) introducing semester system and change in examination procedures to provide multiple assessment of students' performance;

(d) improving student-teacher academic relationship and establishing a student council;

(e) providing physical education for all students attending the University,

(f) expanding student medical services;

(g) establishing a central admission and registration office;

(h) establishing a central library and a central card catalogue of acquisitions.

A review of the medical curriculum was also made recently and the results are being tried out in Isfahan Medical School.

Of the two private Universities of Iran, the Medical School of the National University of Iran is still in its early stages and has planned its programme on lines very similar to those followed by the American system of medical education (total nine years).

The Pahlavi University of Shiraz, has recently ceased its direct association with the Ministry of Education and became independent under a Board of Trustees and enjoys more freedom for manipulating its curriculum, staffing, programmes of research and so forth. The experience of the first two years of the present development has been gratifying Affiliation with the well-developed Nemazee Hospital, establishment of full-time employment of teachers in its various forms, expansion of teaching (particularly that of preventive medicine and public health and paediatrics) in the direction of rural communities in conjunction with the Ministry of Health are a few of the most important aspects of new achievements there.

1.3. Pakistan

Several important changes have occurred since the Teheran Conference in the administration of medical education and the policy of the Government in this field. The need for the creation of full-time departments of Preventive Medicine and Public Health has been accepted and is being implemented following a national Conference on Teaching of Public Health and Preventive Medicine held in Lahore in 1963.

Three more medical colleges have been added Sixteen years ago only one faculty of medicine existed and now twelve medical colleges are fully organized. Plans are drawn also to create two new ones as well as to increase the number of admissions by enlarging the teaching bodies and increasing the number of hospital beds and laboratory facilities

A programme is devised for further training of present licentiates to become fully qualified.

A system of voluntary internship will be introduced as from next year to be finally developed to compulsory internship in 1968.

Special attention has been given to the development of post-graduate education in Pakistan. In addition to the Postgraduate Medical Centre in Karachi and the King Edward Medical College, post-graduate programmes were established during 1963-64 academic year in the Liaquat Medical College in Hyderabad offering five degrees and six diplomas in various branches of medicine and surgery.

This development will be guided by a special committee of Deans of Medical Colleges and health administrators who will deal also with the existing deficiencies in various medical centres.

A conference was organized with the assistance of WHO in August last year with full attendance by principals and medical educators from Pakistan Medical Colleges and WHO-sponsored participants from the Syrian Arab Republic and the Sudan. The Teheran Conference report was fully discussed and received unanimous acceptance. The establishment of the association of medical colleges was one of the issues discussed and strongly recommended

The system of selection of students has been reviewed in a meeting of Deans of Medical Colleges and several improvements accepted such as consideration of results of secondary school examinations and previous records of extra-curricular activities

In order to meet the needs of the rural population, a balance is tried out in the number of students accepted from various areas and seats are reserved in each medical school for "rural candidates" as well as special seats for students coming from different regions than that of the medical college. This will ensure better understanding and friendship between the students and the medical groups

Finally, emphasis is given to the question of auxiliary personnel to provide the necessary manpower for development of health services of the country

1.4. Syrian Arab Republic

In order to meet the great demand in training of physicians it is planned to establish a new medical school (second in the Syrian Arab Republic) in Aleppo with the assistance of WHO

1.5. Lebanon

Although Lebanon has no national medical schools, the two Universities (American University and French University) which are not under Government sponsorship, have taken an active part in meeting the demand for general practitioners and specialists for the country and the Region. A committee is organized to review the possibility of shifting students among the medical schools to benefit from the well-developed institutions so closely located

The Teheran Conference was useful in strengthening the convictions of the medical educators to continue with their unchartered endeavours new areas of co-operation among various departments are being explored to advance research, give better service and investigate the regional resources

1.6. United Arab Republic

A preliminary meeting on medical education was organized in September 1962 in Alexandria. The Second UAR Conference held in April 1963 in Cairo after the Teheran Conference had a full participation of 150 medical educators and reviewed every aspect of medical education. A new medical school is being organized in affiliation with the University of Al-Azhar, as a first attempt to foster modern science in this highly traditional University.

Great emphasis will be placed on post-graduate medical education and a special vice-chancellor for post-graduate education and research will be appointed to each university. This appointment will certainly reflect on medical education as well. Also plans are drawn up to organize a post-graduate medical school in Alexandria in the very near future

The establishment of a number of associate professorships with higher remuneration at the medical schools has opened up possibilities for promotion to those who previously had no chance of advancement when the chair was occupied by a full professor The existing ceiling of payments for overtime work and extra teaching has also been removed Presently reorganization of the curricula is under consideration and implementation of the new curriculum is expected to take place by the beginning of the next academic year The compulsory internship which was started two years ago will continue , but will take place after graduation rather than before it, as has so far been the case

The High Institute of Public Health is continuing its development to meet the needs of the country in the training of health workers. Finally, special attention is given to further development of teaching and training of auxiliary personnel.

1.7. Tunisia

The organization of a medical school is under consideration with the assistance of WHO and the United Nations Special Fund. The physical facilities, staffing and curricula of the medical school are being planned The pre-medical course is established and has already started.

1.8. Ethiopia

Ethiopian students receive their pre-clinical training abroad and undergo their clinical training in Ethiopia. This programme is in addition to the activities of the existing Gondar School of Public Health which continues to provide a four-year Bachelors Course for Health Officers to serve in rural areas

1.9. Saudi Arabia

The present and future needs of medical manpower and the advisability of establishment of a medical school in Saudi Arabia are under review. A WHO adviser on Education and Training for Saudi Arabia will soon be appointed.

1.10. Development of Medical Education on the International Scene

Several parts of the world have already embarked on reviewing their system of education and developing organizations for co-ordination of teaching activities and proper utilization of graduates in research, teaching and medical care services

In the western hemisphere, for instance, Brazil with twenty-six medical schools has established an Association of Medical Schools. The Association of Medical Colleges of Colombia, with seven medical schools, is charged with the responsibilities of accrediting teaching hospitals and new medical schools, as well as qualifying specialists

A Pan-American federation of the Medical School Associations has been established, with a full-time executive secretary, having its headquarters in Rio de Janeiro.

In December 1963 the third meeting of African Medical Schools took place in Kampala and a constitution was adopted establishing an Association of Medical Schools of Africa Four standing committees were set up for

1) development of a table of equivalents for qualifications granted under various systems of medical education;

2) development of recommendations concerning post-graduate education in Africa;

3) teacher training;

4) development of recommendations concerning speciality qualifications

It has also been proposed to organize a College of Physicians of Africa with the purpose of assisting in the standardization of speciality qualifications to be granted in Africa

The World Health Assembly held technical discussions during its 1963 meeting on the education and training of Physicians for the preventive and social aspects of clinical practice An inter-regional conference on the principles of how developing medical schools can be assisted is planned for 1964. In Africa where apart from the UAR and South Africa, only seven medical schools exist at present, a Conference is planned for 1964 to deal with the problem of non-existing medical schools It is proposed to review and establish criteria of needs, possibilities to meet them, priorities of the needs and a review of available resources.

Ir the Western Pacific Region, a Conference of Deans of Medical Schools took place during the current year. The difficulties of medical education in the Region, where great differences in the levels of education exist, were discussed.

The Third World Medical Conference is planned to be held in New Delhi in 1966 It is hoped that more facilities for the participation of medical educators can be provided, enabling them to express their views more so than at previous World Conferences where, because of insufficient attendance , the medical educators had not a fully effective voice. It is fortunate and timely that this conference will deal with medical education in developing countries

In the Eastern Mediterranean Region a meeting was organized in November this year with Government officers dealing with the question of fellowships to review policies and administration of fellowships and to find ways and means of meeting the increasing demand for this type of assistance

The situation of medical libraries in medical schools of the Region has been reviewed by consultants during the last two years Although the need for books and periodicals is great, it was found, however, that there is a serious lack of trained librarians. Arrangements have been made for the organization of a course at the American University of Beirut along with the regular librarians' summer course of that University Special additional training will be given in medical librarianship lasting four weeks with the assistance of WHO which will be open to a limited number of participants from the Region.

An important issue under discussion in various international educational meetings has been the selection of suitable teaching methods During the recent meeting of the International Association of University Professors, the use of teaching machines and programmed instruction was found to evoke special interest and discussion It was, however, referred for thorough study to a future meeting

2. CONSIDERATION OF IMPORTANT FEATURES AND DIFFICULTIES OBSERVED IN THE COURSE OF MEDICAL EDUCATION PROGRAMMES WITHIN THE REGION

2.1. General Aspects

The Teheran Conference on Medical Education held from 16 to 24 October 1962 brought out certain valuable principles and details related to the various phases of medical education in this Region One of the most rewarding discoveries was the remarkably uniform approach to most of the problems by the participating members. Despite the varying conditions in individual countries, it was clear that the correct and internationally accepted schemes are applicable to most places.

What is ideal and what is practical must be differentiated, and much patience and industry will have to be exercised to achieve the high standards desired. However, there are several common problems that could possibly be solved without much difficulty and delay while the removal of other obstacles could be undertaken only with the active assistance of the Eastern Mediterranean Regional Office of WHO

The rapidly expanding population and the socio-economic development of agricultural communities towards industrialization has given rise to certain difficulties in medical care and education. The existence of a large medically indigent population, of whom a high percentage are children under twelve years of age, the presence of high infant mortality, the inadequacy of proper means to undertake public health measures and the absence of adequate financial resources for medical care and education, are some of the important problems facing most of the countries in the Region

2.2. Educational, Material and Physical Deficiencies in the Existing Pattern of Medical Education

It was generally agreed that great discrepancies existed between actual needs of the country in the number and type of medical personnel and the educational training imparted to them by the medical schools.

Factors which were held to be responsible, some already discussed in the Teheran Conference, may be grouped as follows

a) Teaching Staff

Faculty members are commonly underpaid and liable to cling to the old traditions and resist new changes

They have little chance to exchange ideas and meet as often as desirable

In many countries the insufficiency of qualified teachers particularly in the basic sciences has produced a handicap in the development of medical education. It has also prevented the creation of new schools needed to meet the increasing demand for medical graduates.

b) Curriculum Content and Method of Teaching

It is recognized that with the development of medical sciences, the curricula of medical schools are prone to be overloaded with new subjects The student has to devote a considerable amount of time to diseases which are uncommon in his country rather than to develop intimate knowledge of most common and endemic diseases Thus the teaching has little relevance with the disease pattern of the community

It was recognized that this situation was not localized in this Region but that similar deficiencies exist throughout the world. It is timely, therefore, that a re-orientation be adopted in the system of medical education in the Region and throughout the world.

Medical education is not an aim in itself but should enable the graduates to serve in the areas for which they have been trained. Although differences exist in the problems relating to rural and urban areas, particularly in the preventive field, the type of training needed is not much different insofar as medical care is concerned. Under the existing system of education, however, graduates are primarily prepared to work in big hospitals and students, following the example of their teachers, have no contact with, nor desire to practise in rural areas even for a short period of time Moreoever, medical educators tend to lose contact with the young graduates when they are posted to rural areas and have, therefore, no chance of becoming acquainted with the problems in these areas.

Students, if not imbued with the idea of self-education, are not always able to apply to the rural practice the knowledge and skill they acquire in medical schools As a consequence it might appear that effort and money expended on giving them an elaborate education was wasted and that a less trained person would have done equally well. In actual fact, however, a young physician properly oriented and trained to administer and supervise group activities of a rural centre which is adequately staffed with paramedical personnel, can prove extremely effective in raising the standards of health and medical care in these areas This can best be effected by the establishment of a close contact between the medical school and the community through a teaching health centre.

In this connexion experience in the United Arab Republic is worth mentioning, whereby teams of medical educators travel to different places and work with the local physicians, organize lectures and conferences In this way the local physicians, otherwise isolated, are kept informed of new developments in medical practice and accept more readily their work in rural areas.

2.3. Fresh approach to Medical Education and Medical Care in the changing Socio-economic Conditions of Developing Countries

Great concern and doubt was voiced by a number of participants as to whether the present system of medical education and the type of medical care resulting from it could meet the current and future needs of the community, fulfil the expectations of students and give a true feeling of accomplishment to the educators in producing the necessary medical and health manpower.

It was indeed advocated to take a fresh look at medical care and medical education from all points of view and if necessary to recast ideas on the rôle of the medical school itself.

One definition on the rôle of the medical school expressed in the meeting was as follows

a) to provide life-time education for physicians;

b) to conduct medical and related research;

c) to serve as an example of medical care of the highest attainable standard;

d) to provide assistance to the community in the planning and training of the auxiliary and para-medical personnel required to meet community needs at its current stage of development;

e) to participate in the overall planning of health and medical care.

The justification for revising the curriculum of medical education is the fact that the present course is overcrowded due to continual expansion of medical disciplines Consequently, it would be impossible to attempt to provide effectively for the multifarious activities connected with medical practice within the existing framework of the graduation course. Therefore, the feeling was that a revolutionary approach had become inevitable and must be explored

One solution suggested was to break down the rigidity of the existing system and to replace it by fractionalization of learning at different levels. In this context it may be possible to expand the scope of the teaching of science in the university as well as pre-medical studies to include such courses as human genetics, statistical methodology and normal human structure and functions (anatomy, physiology, biochemistry). The product of such training, which could be called a human biologist, would be qualified to embark upon further studies in biological sciences or to enter the medical school This has the great advantage of giving a chance to those students who are interested in basic science and research to continue into their desired field without wastage of additional time, while still others might be absorbed in industry,be employed as science teachers or work in branches related to medicine and biology

Under this system, the medical school would receive students with full knowledge of basic sciences and sufficient enthusiasm and desire to become physicians. The curriculum of the medical

school could be arranged with the organ-system approach in mind by the integration of clinical and basic parts at pertinent levels and sequences For example the teaching of infectious diseases could be combined with instruction in bacteriology, immunology, clinical biochemistry, pathology, etc.

Proper emphasis will be necessary to acquaint the students fully with the local pattern of common ailments Indoctrination in the preventive and community medicine inculcated as an integral part of each discipline could also ensure that the final product is community-minded and has a better appreciation of human society and values. Details of additional training of such students for branching off into general practice, public health or speciality training could be worked out and continuously modified according to the individual needs of each country, its geographical pathology, environmental conditions and the stage of its socio-economic development.

The proposed system would also partly overcome the lack of basic science teachers already acute in some countries of this Region and other parts of the world. Some organized (perhaps compulsory) system is necessary for graduate students to spend part of their early career in rural communities. Advantage should be taken of the time when the young physician is not entangled with the various family responsibilities This service or its equivalent may be considered as a prerequisite for every physician who wants to apply for post-graduate studies inside and outside the country

There exists a great danger in the way of thinking that second class doctors are good enough for poorly developed communities On the contrary, highly qualified physicians are

needed for such areas for the reason that they must render proper service, conduct research on common diseases, think scientifically and appreciate and apply scientific techniques if they are to exert the desired influence on the promotion of community health. At the same time they will have to be the leaders and supervisors of auxiliary health personnel serving in rural areas

The Group stressed the fact that medical education should be an integral part of an overall health development plan and that medical educators should actively participate in its planning This will become feasible once the medical schools establish direct contact with the community through its own teaching health centres.

Whatever the purpose of medical education it was felt that this effort is of considerable socio-economic importance, apart from the humanitarian, psychological and philosophical aspects.

The shortage of medical manpower is acute in most countries of the Region. Consequently the faculties of medicine are placed under pressure by local governments and health agencies to train a far greater number of students than their facilities and teaching staff would allow. With the introduction of modern audio-visual aids, availability of cheap edition of text-books and their wide circulation, as well as the adoption of certain changes in medical curricula, much can be done to increase the proficiency of education The crippling effects of the present low number of post-mortem examinations must be overcome by every possible means including the exploration of legislative action and obtaining the co-operation

of religious leaders At any rate increasing the budget for medical education and freedom of its utilization by the medical educators is essential, although the extent to which the resources of the developing countries can be taxed by the heavy cost of medical education has to be kept constantly in mind

It should also be pointed out that the effort to deal with the presently recognized problems in medical education would yield results only after the passage of a certain number of years and that changes in any system of education should be projected on the needs of the future This would imply that experimentation is needed in the acquisition of knowledge and in the evaluation of new ideas as to their practicability and usefulness

3. INTER-COUNTRY AND INTERNATIONAL CO-OPERATION IN THE PROMOTION OF MEDICAL EDUCATION PROGRAMMES AND PROPOSALS FOR THE ROLE OF WHO IN THIS FIELD

Following specific proposals were made

3.1. Regional Consultative Group on Medical Education

To ensure the continuity of studies on medical education, the Group recommended that the Regional Office should arrange a panel of well-known medical educators to advise and assist in its efforts to promote and raise medical education in the Region This panel should be assisted by a full-time medical officer in the Regional Office. The Office would call on the members individually or in groups, whenever the occasion arises for their assistance with the following purposes in mind

a) assistance in the formulation of minimum standards of medical education, including standardization of minimum pre-medical requirements;

b) advice on hospital standards, particularly of teaching hospitals;

c) advice on medical curriculum;

d) advice on recruitment of faculty members;

e) advice on policies;

f) assistance in exchanging faculty members of different schools in the Region, so that they can come in contact with their colleagues and learn about one another's research and educational interests and problems;

g) assistance in planning short-term fellowships to deans and senior teaching staff to go to centres within or outside the Region to study current trends in medical education.

3.2. Regional Information Centre on Medical Education

The Group recommended that a centre be established within the Regional Office to serve as direct link between the members of the consultative group and WHO. More specifically it should provide various services for the benefit of the medical educators and teaching institutions in the Region such as·

a) publication of a Regional Medical Directory and Calendar of Events in Medical Education containing names of senior faculty members, their background and qualifications as well as their fields of interest. This would facilitate communication among individuals with similar interests. Other teaching institutions may also be included as well as list of conferences and events pertaining to medical education in the Region and elsewhere References may also appear on important and recent publications on Medical Education;

b) supply of reprints of articles that are needed for research and other projects of faculty members in the Region;

c) advice to medical investigators on possible sources of support for research from other agencies;

d) communication of abstracts of research in progress in the Region;

e) information on training courses and educational opportunities;

f) announcements of available vacant positions in educational institutions if so requested by the institution.

3.3. Encouragement and Support of Model Medical Faculties in Member Countries

The Group was of the view that each country should explore the possibility of establishing a model medical school which would strive for excellence and serve as an experimental centre in medical education to test new ideas on pre-medical training, admission standards, examinations, curricula, research, employment of full-time professors, post-graduate education and policy decisions. Such institutions should preferably be located in areas where integration exists or can be effected among the various health agencies and the medical school. The socio-economic as well as medical problems of the community should also be studied there.

As a preliminary step towards this experimentation every existing medical school within the Region should be encouraged to undertake research projects on students' attitude to medical education

3.4. WHO Financial Support for Medical Education Programmes

Although WHO is already supporting medical education and research, the Group was of the view that this effort should not only be increased, but be made more productive by allocating funds, as a specially earmarked portion of the overall budget, for medical education exclusively The possibility of a special contribution from voluntary sources was also mentioned. If member countries were to facilitate direct contact between medical colleges and WHO on programme matters in medical education, it would lead to greater efficiency and speedier disposal of routine transactions

3.5. Libraries

Many medical schools need assistance in obtaining new medical books and periodicals either because of paucity of funds or shortage of foreign currency There is also need for well-trained and well-informed medical librarians in most schools. The Group recommended that WHO should assist in meeting some of these deficiencies.

3.6. Text-books

As already suggested in the Teheran Conference WHO should actively assist in the provision of cheap editions of standard medical text-books through exploring the following possibilities.

a) the publishers may be able to ship the unbound sheets of text-books to individual countries where they can be put together and bound on the spot thus reducing the overall price;

b) the publishers may be able to produce cheap editions of text-books;

c) medical text-books of sufficiently high standard may be produced and published within the Region

3.7. Design and Planning of Medical School Facilities, including Teaching Hospitals

The expansion of already existing medical schools as well as the creation of new institutions require a great deal of planning and careful studies if time and money are to be saved. There are already important publications by WHO, the United

States Public Health Service and the Association of American Medical Colleges that could be used as sources of reference for the design of medical schools and laboratories. Although these references are very helpful, they should be supplemented by free exchange of ideas between the deans and the faculty members concerned and their experienced colleagues abroad. WHO may provide funds for experts to visit institutions where such planning is in progress. Similarly WHO may provide funds for two or three responsible planners of a new medical school or other teaching institutions, to make a tour of the existing institutions throughout the world to gather information on different approaches and prevailing ideas. This experience would not only enlighten the educators concerned but would ensure that the large sums of money that would go in the construction and equipment of schools would be advantageously spent

3.8. Inter-country Co-operation

The Group considered to what extent and in which form medical schools and medical educators could co-operate, not only in solving their own problems, but also in supporting the efforts of WHO - limited in staff and funds - to arrange for inter-country collaboration. It was stated, although this subject could not be sufficiently explored, that it would be desirable to pursue the idea of a regional association of medical education and that perhaps members of the group or the group in toto might initiate action in this direction in the near future.

CHAPTER II

PAPERS SUBMITTED TO THE SPECIAL GROUP MEETING

PROBLEMS OF MEDICAL EDUCATION IN PAKISTAN

by

Professor Najib Khan
Chairman, Academic Council
Professor and Head of Department of Medicine
Liaquat Medical College
Hyderabad, West Pakistan

Problems of medical education in Pakistan should be viewed against the background of the history of the country. It was over a hundred years ago, about the same time that the Medical Act was enforced in Great Britain, and London hospitals began to enroll medical students, that in Pakistan formal medical education was started; it has continued on the British pattern ever since. Contact with Britain also resulted in many Pakistanis obtaining their undergraduate education, and many more their post-graduate education, in the United Kingdom. However, on 14 August 1947, with the partition of the Indian sub-continent and the creation of Pakistan, the non-muslim doctors left Pakistan. Less than one thousand doctors remained to take care of 72 million of the population. At that time only one medical school came to the share of Pakistan, and even that school was denuded of most of its staff and students who were non-muslims. To that solitary school, eleven more schools have been added in the past sixteen years. Therefore, some problems of medical education in Pakistan are similar to those in the developing countries, and others not unlike those in the progressive countries. The problems can be discussed under six headings -

I Need for more basic doctors

II Need to improve the standard of basic doctors

III Need for greater emphasis on post-graduate medical education

IV Greater attention to medical research

V Better utilization of doctors

VI Health budget, which includes medical education

I NEED FOR MORE BASIC DOCTORS

In Pakistan there is one doctor for 12,500 inhabitants. This is bound to result in unsatisfactory health conditions, which are reflected by an infant mortality rate of 96.7 as compared to 24.9 in the United Kingdom and 26.4 in U.S.A. There are 12 medical schools in the country, three of which came into existence during the last years, and will not produce any graduate doctors for another five years. Nine older medical schools annually add 770 doctors; but after five years, when all the 12 medical schools produce doctors, there will be an addition of 860 doctors each year; and only after another five years, when all the medical schools are fully developed and each produces 100 graduates a year, which is the standard for the medical schools in Pakistan, will there be an output of 1,200 basic doctors annually.

Considering the average professional life of the doctor to be 25 years, in five years 1/5th of the present doctors will have dropped off, and the new doctors who will have been added will be 3,850. Therefore, at the end of five years, with the increase in population of 2.2 per cent each year, the ratio of the doctor to population will be 1 10,877. Ten years from now, according to the same formula, and with the addition of 4,300 additional doctors,

the ratio of the doctor to population will be 1 10,055. This does not show any appreciable improvement in the doctor/population ratio even in ten years. To be able to attain the doctor/population ratio of 1 5,000 in five years, Pakistan will need 11 422 more doctors, and after ten years 12,363 more doctors. Therefore, the speed of the production of doctors has to be greatly increased, in fact three times the present rate

In order to obtain the much needed additional doctors the following five methods are possible and it is felt that more than one of these will need to be adopted, if the serious deficiency of doctors is to be overcome

(i) Build more medical schools. There is no serious shortage of fully qualified people for the faculties and a great abundance of students wishing to join the medical profession In one medical school last year there were 1,280 applicants for one hundred seats.

(ii) Increase the admissions in the existing medical schools by enlarging the faculties and increasing teaching hospital beds, laboratory space being adequate in most of the medical schools for even three times the present enrolment.

(iii) To expand the faculties of basic medical sciences of the existing medical schools where physical facilities exist to teach many more students than now. For the clinical teaching some of the bigger district hospitals like Bahawalpur, Quetta, Sukkur, and others could be expanded This will be much more economic than building new medical colleges with the basic departments.

(iv) To admit science graduates to the medical schools, there being a plethora of science graduates qualifying each year, and reduce the period of study at the medical school from five to four years.

(v) To have early bifurcation of education of the curative and the preventive doctors by diverting after two years of basic medical sciences, public health doctors to public health institutes, as is done in USSR. This will result in relieving the burden from the clinical departments of the medical schools, and in quicker production of preventive medicine doctors

II NEED TO IMPROVE THE STANDARD OF BASIC DOCTORS

Selection of the students needs more careful attention than has been paid so far. It is no credit to any medical school to say that less than one third of the students admitted qualify in the minimum prescribed period, this is also a serious national waste.

The teaching in some of the medical schools is more or less a vocational training The student neither learns application of the scientific methods nor does he acquire the faculty to teach himself. He learns by rote with the result that for him medicine cannot become a "life-long study". A sense of responsibility which is so essential for the professional man is also not inculcated in the student. The student is only concerned with passing his examination, and not with understanding or learning the subject There are very many reasons for this, some of which are listed hereafter

1. At the Secondary School

   a) Poor preparation for a scientific career

   b) No proper pre-medical phase

2 At the Medical School

   a) Poor teacher/pupil ratio, especially the full-time staff, which results in too little personal contact of the student with the teacher.

   b) Too many extra-curricular activities and too little help to the teachers, and in some cases too many outside interests.

   c) Little attention is paid to the art of pedagogy with the result that the teacher teaches as he was himself taught some thirty years earlier.

   d) The teachers after their post-graduate education live in isolation and have little opportunity to see other teaching institutions at home and abroad.

   e) The rôle of the teacher to inspire the student and set an example which the student can follow, is lacking.

   f) The student does not come in contact with "excellence", and, therefore, does not learn the "philosophy of the first rate", without which philosophy the student does not strive to improve the conditions around him in his future professional life.*

   g) Rôle of the medical school and the teaching hospital to act as a beacon of light for the whole profession, is often missing

---

*First World Conf on Medical Education P-16, Address by Sir Richard Livingstone

h) Not enough time is devoted to planning and co-ordinating the curriculum and the teaching programme.

i) Too much reliance on the annual examination and not enough importance being attached to class-room and hospital work

j) In the clinical subjects the only method of learning, by apprenticeship, with gradual increasing responsibility for the care of the patients does not seem to be fully appreciated

k) Teaching of clinical subjects is confined only to the hospital

l) The internship after graduation, which is very important, has not yet been started.

m) Too little use of the modern audio-visual aids, which can help to make the smaller faculties more effective.

n) Unsatisfactory terms and conditions of the teacher, which leave him disgruntled and frustrated.

III NEED FOR GREATER EMPHASIS ON POST-GRADUATE MEDICAL EDUCATION

Post-graduate medical education is not only necessary to have a body of highly educated doctors to appreciate the difficulties of the country and to solve them, but also to raise the standard of specialized professional practice, to undertake research, and above all to staff the faculties of the existing medical schools as well as new medical schools. Pakistan has so far depended for its post-graduate medical education mainly on the United Kingdom and U.S.A. However, a country with such limited foreign exchange resources and in need of such a big number of post-graduates cannot possibly meet its demands from foreign countries. Therefore, serious attention to post-graduate medical education is as important as the undergraduate medical education.

Attempts have already been made to meet the demand Two medical schools offer post-gradute work. An Institute of Public Health and Preventive Medicine has existed for over a decade. A Basic Medical Sciences Institute was founded in Karachi in 1959, and recently a College of Physicians and Surgeons has also been started to act as an examining body for the post-graduates, on the pattern of the British Royal College. These measures do not seem to be adequate compared to the existing needs.

It is universally recognized that post-graduate medical education can only be imparted on the principle of apprenticeship and not only in the class-room of a college. Apprenticeship should, therefore, be given greater importance, as in U S.A., rather than the examinations, as is done by the Royal Colleges of Great Britain In Pakistan too much importance is attached to passing the formal examinations, and not enough credit is given for the apprenticeship of four years, which is available in most of the teaching hospitals, in nearly all the specialities. Without reorientation of this approach, the problem of post-graduate medical education cannot be solved. The College of Physicians and Surgeons could play a more useful rôle by influencing to raise the standard of apprenticeship rather than by merely arranging examinations

IV GREATER ATTENTION TO MEDICAL RESEARCH

Medical research has not attained its rightful place in medical education and medical practice. Medical research is considered by some as a luxury only for the rich and progressive countries. The real rôle of research in medical education is to enable the medical teacher to remain a scientist, the medical student to be initiated into

the scientific methods, and to develop an aristocracy of the profession by getting an insight into the medical problems of the country and to solve them Without medical research, the medical school becomes a vocational training centre, and training must be distinguished from education

In many medical schools, medical research, not having been given the required place of honour, has been neglected. No doubt, lack of funds and facilities and the absence of proper atmosphere for research are some of the causes for the lack of development of research in our medical schools. The most important reason for apathy towards research, however, is the lack of appreciation of the research workers and failure to recognize the importance of medical investigations.

V BETTER UTILIZATION OF DOCTORS

The shortage of doctors is rendered more acute by improper utilization of doctors Very many doctors are engaged in duties which can be performed by para-medical and non-medical personnel. Each public health doctor is devoting a substantial part of his time to duties which can better be performed by a public health engineer. Doctors in the teaching hospitals are being used to teach the basic medical sciences, where the non-medical scientists can relieve a great many medical doctors. A great deal of administrative machinery keeps the doctors occupied, though the doctor may be necessary to lay down policy and exercise control, but a great deal of daily routine can be undertaken by the non-medical administrators and secretaries No professor in any medical school has any secretarial help, which perforce compels him to waste a considerable amount of his time in non-medical duties. A great many doctors can be relieved, if use is made of the non-medical scientists to replace the biochemist, micro-biologist, chemical examiners, etc.

For the proper utilization of the doctors, proper planning is necessary, and that planning should be in the hands of the experts. Too often policy is laid down and a vital decision taken either by the lay administrators or influential politicians.

VI HEALTH BUDGET

A recent WHO study on the cost of health services brought to light that countries like Israel, Sweden, Czechoslovakia and Ceylon spend 11 1, 9.3, 8.3 and 5.2 per cent respectively of their capital development budget on health, but in Pakistan only 3.32 per cent is devoted to health. The average annual national per capita income in Pakistan is $54, therefore, a great deal of assistance from the national budget is necessary for the proper development of medical education and health care. Exact figures on expenditure for operating the health services are not available but on the basis of approximation, it appears that the annual expenditure on health is less than 2 per cent of the total national income This imposes a serious limitation, which has resulted in the ratio of hospital bed/population of 1 14,663 as compared to 129 in the United Kingdom, 122 in U.S.A

In Pakistan, cost of building a medical school with 500-bed teaching hospital is $600,000, while a modern hospital with its ancillary services costs $2,000 per bed. Medical education of a doctor costs approximately $5,600 and the average daily cost of a hospital bed is $3.- Therefore, the biggest problem holding up development in the field of health and medical education in Pakistan is the lack of funds. Bigger faculties, complete full-time staff,

more medical schools, more hospitals and better health care are only possible with more financial support Without greater financial support to the development of health, national health cannot be improved, and without better health, national income cannot increase. There is a vicious circle which results in a small national income, though national resources are vast. Greater financial support to the health sector will pay high dividends in the long run.

ON THE RESULTS OF THE TEHERAN CONFERENCE

by

Dr. Dawood Mustafa
Head of Department, Faculty of Medicine,
University of Khartoum,
Khartoum, Sudan

The World Health Organization (Eastern Mediterranean Regional Office) is rendering very great service to the Region by holding conferences and meetings on medical education. The discussions and reports throw light on many aspects of medical education and matters related to health, and are a source of enlightenment to individuals, medical faculties and health authorities. The practical approach to these problems ensures that much good will ensue. The countries of the Region are greatly indebted to the Organization.

This paper deals briefly with some of the results of the discussions of the WHO Conference on Medical Education, Teheran - 1962, and some of the problems that face us in the Sudan. It also deals with possible ways by which WHO might help this country and other countries in the Region.

The Broadly Educated Doctor

One of the objectives of medical education is to develop the broadly educated doctor In this Faculty the importance of general culture is being emphasized to the students. At Faculty Board level, ways of introducing language and social subjects in the pre-medical and pre-clinical years are being considered. There seems

to me to be a very good case for increasing our present one year of pre-medical (post-secondary) study to two years in which humanities and a language may be taught on a large scale This is a matter for discussion by all concerned, and if it could be realized it would raise the general culture of the medical student tremendously

The General Duty Doctor

Often our new graduate is posted to an out-station to work on his own very soon or immediately after his internship period. It is our job to prepare the graduate for this The curriculum is now being reviewed and in the undergraduate period more stress will be given to practical procedures, laboratory methods, attending operations and dealing with or attending to labour cases In the internship period more responsibility under supervision will be given

Medical Manpower

The number of doctors in the Sudan is below the optimum and in order to increase their number to meet the present and future needs, the intake into the Medical Faculty must be increased appreciably The last intake was fifty-four students A national planning body is essential and H E. the Minister of Health is actually taking steps in this direction

One of the difficulties that can be anticipated is the shortage of teachers to meet this increase Even now a shortage exists There is difficulty in recruiting Sudanese teachers in medicine because of the general shortage of doctors in the country, and because the offers are not attractive enough There is also

difficulty in getting expatriates. The training of a young Sudanese graduate will take about six years before he becomes a lecturer. Even these young graduates are not available in adequate numbers because of the small output of doctors, and the need for them elsewhere.

Basic Requirements and Selection of Students

More liaison and co-ordination between the University and Secondary Schools is needed in order to improve the quality and number of students coming to the University and the Medical Faculty. The number of suitable students is at present not large enough and if expansion is to take place, the output from the Secondary Schools must be increased very appreciably. The planning body needs to go into this problem as soon as possible. At present we have a scheme operating for the expansion of secondary as well as other levels of education.

In the selection of students, reports on performance and conduct from Secondary Schools and the Faculty of Science will help At present we depend on the examination results and a short interview of about fifteen minutes.

Ways of reducing the rate of dismissals from the Faculty of Medicine need to be gone into.

Curriculum and Teaching

The Faculty is now reviewing the Curriculum in the light of modern views on medical education and the recommendations made at the WHO Conference on Medical Education in Teheran More emphasis will have to be given to preventive and social medicine, psychiatry and paediatrics Students will have to take part in research and

to make more use of the library. They are already participating more actively in teaching themselves in the clinical fields e.g. by clinical demonstrations and discharge clinics.

Steps are being taken to raise the standard of the Teaching Hospital and H E The Minister of Health is specially interested in this problem.

In order to help medical teachers and would-be teachers in teaching methods, the Head of the Department of Education, who showed interest in this matter, might be approached.

Staff

There is a shortage of teaching staff In some Departments like Physiology and Pathology the need is very acute. In order to obtain the optimum teacher ratio of one to ten, many full-time teachers need to be appointed, but attempts have not been successful.

Shortage of teaching staff is hampering research Another factor is shortage of technicians

There are few Sudanese technicians We are finding difficulty in recruiting expatriate technicians to do the routine work, help in research and to teach Sudanese trainee-technicians The training of technicians was started in this Faculty about two years ago and one way by which WHO can help may be through the provision of trained technicians and tutors to assist in this field

Internship Training

It is very difficult for a new graduate to work on his own immediately after his internship period of one year. This matter needs to be reconsidered and the period should either be extended

to one-and-a-half or two years, or the doctor posted for at least a year to the Teaching Hospital after the one-year internship. The intern needs to be trained in ophthalmology, psychiatry, preventive and social medicine and administration before he is posted to an outlying station to deal with everything.

Post-graduate Education

Post-graduate training in the fields of medicine, surgery and obstetrics and, to a limited extent in other disciplines, is being carried out in the Faculty. The whole field of post-graduate education is being looked into and ways of promoting it are being sought.

WAYS BY WHICH WHO MIGHT HELP THE SUDAN

1. By providing visiting professors who are needed especially in departments where there is a great shortage of teaching staff e.g. pathology and physiology. WHO might help the Faculty to obtain teachers where there is an acute shortage.

2. By arranging visits by eminent medical educators and planners whose advice would be invaluable.

3. By awarding fellowships to junior as well as senior members of the Faculty, the latter to visit centres of repute to gain knowledge on matters of research and medical education.

4. By assisting the Faculty in obtaining audio-visual aids (slides, films, etc.). There is a real need for assistance in this field.

5. By providing trained technicians and tutors or advising on this matter.

The whole Region might be helped by a regional professional body to advise on medical education in the Region and by circulating information regarding centres of research and research projects.

ACTIVITIES OF THE WORLD HEALTH ORGANIZATION IN THE FIELD OF MEDICAL EDUCATION IN THE UNITED ARAB REPUBLIC

by

Dr. A. Lotfy Aboul-Nasr
Professor of Cancer Surgery and
Director of the Cancer Institute,
University of Cairo, United Arab Republic

The World Health Organization completed its fifteenth year in 1963 It was established in April 1948 as a United Nations Specialized Agency At its inception, the number of States signatories of the WHO Constitution amounted to sixty-one In 1962, the World Health Organization had 115 Member States, a nearly twofold increase. Article I of the Constitution defined the aim of WHO as follows "The objective of the World Health Organization shall be the attainment by all peoples of the highest possible level of health". The definition it gave to health was "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

It is obvious that any attempt at realizing this humanitarian and noble aim requires perfect organization, close co-operation of Member States, available financial resources, guidance for the utilization of medical and scientific experience in the interest of all as well as other great efforts such as exerted by the World Health Organization. It is also obvious that the results of all these efforts in various communities will ultimately depend on the number and efficiency of those directly engaged in medical services in these communities; in other words, the standard of health in any community will depend to a large extent on the standard of manpower serving that community in the medical field, whether this standard is related to adequacy of number or to technical and scientific proficiency.

It was, therefore, considered expedient by the World Health Organization to give increasing attention to the problem of preparing medical staff with the idea of assisting various governments in overcoming the deficiency of medical manpower, which is a problem facing, in varying degrees of acuteness, most of the WHO Member States.

Thus WHO activities in the field of medical education were increasingly felt in the last years

These activities were not restricted to assistance in the preparation of physicians They also included the preparation and training of technical personnel, both medical and paramedical, required for the various medical services, such as pharmacists, dentists, nurses, technicians and others. Moreover, these activities covered basic education and postgraduate studies which are necessary to provide specialists in the preventive, therapeutic and investigative fields.

The medical education programmes of the World Health Organization consisted of three main parts.

I ASSISTANCE IN SOLVING THE PROBLEM OF SHORTAGE OF MEDICAL MEN

This problem varies a great deal in nature, size and urgency from one state to another A uniform solution that could be applicable to various countries is not, therefore, feasible. The medical requirements of developing and newly independent countries as well as the circumstances and educational and technical potentialities of each differ greatly, a fact which makes it necessary for programmes of assistance, which WHO may provide in this field, to be varied and flexible in order to conform with the circumstances in which they are applied.

II ASSISTANCE IN DEVELOPING MEDICAL EDUCATION AND RAISING THE TECHNICAL AND EDUCATIONAL STANDARD

The purpose of this type of programme is to introduce modern educational and technical methods with a view to developing medical education and training in developing countries. This is by no means an easy job Amongst the paramount difficulties which impede the required developments are the attitudes of indifference or support of the established old habits and customs which oppose new practices. It was, therefore, very necessary to take all these factors into consideration when drawing up assistance programmes so that they may create, in the first place, the psychological influence necessary for curbing the natural human tendency against change, and to ensure acceptance of the concept of change as well as serious participation in these developmental programmes. The preparation of the teaching staff, according to modern trends, is achieved either by fellowship programmes and sending candidates for study in advanced countries in various fields, or by providing expert professors, individually or in groups, to developing countries for limited periods.

III STUDY OF MEDICAL EDUCATION REQUIREMENTS AND METHODS IN MODERN AGE

The current century has witnessed a fundamental change in medical sciences which covers the basic scientific knowledge and its clinical application. This has been associated with a radical change in social life, consequently the environmental conditions under which the medical profession is being practised also has undergone certain changes. Community requirements of medical services have similarly varied from those which existed in the early part of this century. It is, therefore, natural that a change in the methods of medical education should follow this changing trend in medicine. The last twenty-five years of this century, therefore, have witnessed many experiments pertaining to the development of programmes and methods in various phases of medical education

The World Health Organization contributes to the propagation of modern medical education by various means.

1. It follows modern trends as well as new experiments in the field of medical education in various countries. This Organization collects, tabulates, studies and analyzes information pertinent to medical education programmes and methods, and then publishes the results of its studies for the benefit of all countries in the world.

Amongst the publications issued as a result of these studies, reference is made, as an example, to the following

a) World Directory of Medical Schools

This publication contains information on 650 faculties of medicine in various countries, and describes the main characteristics of medical education in eighty-three states.

b) Inventory of Teaching Equipment

This is the result of a study organized by WHO in collaboration with UNESCO and undertaken by one hundred professors of basic medical sciences It contains details of the laboratory inventory required for teaching anatomy, histology, physiology, biochemistry, pathology, bacteriology, pharmacology, public health and preventive medicine, as well as a review of modern trends in teaching these subjects

c) Bibliography of Undergraduate Education

This publication which covers the decade 1946 - 1955, contains 3000 references tabulated in accordance with the requirements of undergraduate education, including the selection of medical students and educational methods, at different stages, and ending with the methods of utilizing television in clinical teaching.

d) International Survey of Paediatric Education

This study, which has been undertaken in collaboration with the International Paediatric Association, covers the methods used by European, Latin American and certain Asiatic countries. It is a supplement to a similar study carried out on methods applied in the USA. It contains important and useful proposals for the development and advancement of paediatrics in all countries.

Various publications have been issued highlighting the importance of preventive and social aspects in medical education They were the product of many different studies in several countries since the inception of WHO. Perhaps the emphasis on the importance of integrating the preventive and social aspects with the therapeutic concepts is one of the most important results of WHO activities in this field

2. The World Health Organization studies and analyzes (through various means), the requirements of Member States in the field of medical education. As an example, the relevant study pertinent to member states in South-East Asia has been completed, and a report thereon has been prepared in 1954. The plan laid down for the study of the requirements of the Eastern Mediterranean Region is now being implemented

3. The World Health Organization, either separately or in collaboration with other agencies, has organized various meetings for the discussion of problems related to medical education either at the international or regional level These meetings have included conferences, symposia and seminars. The First International Conference on Medical Education was convened in London in 1953 under the sponsorship of the International Medical Association and the

World Health Organization The Eastern Mediterranean Regional Office, Alexandria, organized the Regional Conference on Medical Education in Teheran in October 1962 A committee of experts for the follow-up of the work of this Conference will meet in Alexandria in December 1963. The Eastern Mediterranean Regional Office has contributed effectively to the United Arab Republic Medical Education Conference, which was held in April 1963, through the provision of many documents, studies and important information. Publications issued on the results of these international and regional conferences and meetings provide important sources of reference for everyone concerned with medical education.

Perhaps it would be appropriate to mention here, as an example, certain WHO activities in the field of medical education in the United Arab Republic.

1. Fellowships

260 fellowships programmes have been sponsored by WHO for training and postgraduate studies, the most important of which are in the fields of epidemiology, public health, health administration, radiobiology, bilharziasis control, occupational health and industrial medicine.

2 Higher Institute of Nursing

This Institute has been established in Alexandria as a result of an agreement concluded between the Government of the United Arab Republic and the World Health Organization It is the only Institute from which nurses graduate at the university level in the Middle East

3. Development of Nursing Education

The World Health Organization assists at present the United Arab Republic in the strengthening of nursing education, development of nursing schools and organization of study courses for graduates in order to raise their technical and educational standards.

4. High Institute of Public Health

This Institute has been established in Alexandria with WHO assistance for postgraduate studies in health administration, sanitary engineering, occupational health, hospital administration, medical statistics and other branches of public health. In addition, field investigations are carried out on health problems connected with social and urbanization development in the United Arab Republic

5. Delegation of Scientists in 1955

At the end of 1955, the World Health Organization sent to the United Arab Republic a delegation composed of ten scientists. The delegation stayed one month in the country, and its members gave lectures and participated in medical education at the three Faculties of Medicine. During the last week of their visit, a symposium was held to discuss problems related to medical education After completion of the visit, the delegation submitted a comprehensive and useful report on medical education in the United Arab Republic, which also included recommendations for solving the problems and raising the standards of teaching.

6. Provision of Experts and Visiting Professors

The World Health Organization provided a number of experts and visiting professors to the United Arab Republic in order to assist in the study of certain specific medical problems and in the development of new fields in medicine

THE PATTERN OF MEDICAL EDUCATION IN DEVELOPING COUNTRIES

by

Dr Harold Margulies
Chief of Party and Professor of Medicine,
Postgraduate Medical Centre,
Jinnah Central Hospital Compound,
Karachi, Pakistan

A discussion on medical education by the Eastern Mediterranean Region immediately suggests a special point of reference. There is an inference, which is correct, that the Region must consider its problems distinct from those of other areas of the world. Unfortunately, most discussions on medical teaching pay only passing attention to the requirements of the nation and concentrate on the development of a basic doctor. Before proceeding to any of the academic issues, there must be a full review of the greater issues. There must also be agreement that the problems of the community are, indeed, the problems of the medical colleges.

The traditional universities of Europe have developed from generations of devotion to classical learning. The land grant colleges of America began similarly but changed to meet the demands of a frontier-developing country. Now there is a balance between the pursuit of knowledge in a very pure sense and a highly practical curriculum which is sensitive to the changing requirements of the people. As these have moved away from rather primitive agricultural activities to complex socio-economic considerations, the universities have often led the way. Today they are an integral part of the international thinking of the United States.

Medical colleges began differently but in a peculiar way have had a similar orthodoxy to that of the European universities. They have altered but little in response to the community needs. In some

countries, doctors were trained as apprentices, later in hospitals, even later in colleges built around hospitals An intimate relationship with universities is a relatively modern concept. Their goal, rather roughly stated, has been to train doctors to the highest level possible, usually as general practitioners; now research studies and more specialization are being emphasized. What happened to the medical graduate, where he went, how good a doctor he was twenty years later, have all been of minor interest to the medical college. In some institutions there has been a tendency to regard the long-time practitioner with scorn. In all, there has been a strong emphasis on the management of the individual patient and the inquiry into specific clinical disease states. As the isolated physician has derived less pleasure from the scientific nature of his life, he has become more attracted to the financial aspects. There are, fortunately, many admirable exceptions who delight in the true spirit of their profession.

We would do well to begin with the health requirements of the nation (although one of the most urgent of these is population control, it probably does not have a place in our current thinking, excepting as a part of the preventive medicine programmes). Every couantry of this Region has fundamental problems which were made clear by the Conference in Teheran in October 1962 These include. a large rural population; malnutrition and infectious diseases with high morbidity and mortality rates; a severe shortage of technical personnel of all kinds; a tendency for doctors especially to crowd the cities and avoid the rural health centres, a dearth of inquiry into the epidemiology and control of diseases, a poorly-paid public health and teaching career relative to the lucrative private practice. It is highly reasonable that these considerations become a part of the plans of the medical colleges, those that exist and those that are planned, and that the preparation of all kinds of auxiliary help be an intimate portion of the whole programme

Medical graduates of Pakistan wish to remain in Karachi, Lahore and Dacca; if possible, they will leave the country for training abroad and will stay abroad as long as they can. In Syria they cling to Damascus, in Iran they crowd into Teheran, and so on, and everywhere they aspire to get foreign training Those who teach prefer clinical positions which offer both prestige and private practice. Basic science faculties receive second-class citizen treatment with poor salaries, slow promotion, and rare opportunities for research. Both government and private medical colleges beg for doctors in the basic sciences but discourage their interests by their conditions of employment.

How does the medical college meet the nation's needs at present? Does it teach rural medicine? Does it honour its teachers of preventive medicine? Does it regard its basic science professors? Does it direct its graduates to the areas of the country where they are needed? Does it develop its own programmes and de-emphasize the charms of foreign experience? Does it create an institution which reflects local conditions rather than foreign traditions? Does its faculty play a part in the total community health programme? Does it offer further training to those who have gone to rural health centres rather than those who clung to the medical college? Does it work tirelessly to reform its Government and itself to meet the greater need? To all of these questions, the answer is No' It has its own problems which make it as a college progressively more set in its anachronistic state Nor can the deans, councils, and faculties be blamed; they are deeply involved in efforts to make an ill-fitting institution meet needs for which it was never intended.

Despite all of these negative factors, there are opportunities for a striking improvement. These are inherent in the very nature of the countries of the Region. Because they are all developing they are accustomed to challenge, to new ideas, to experimentation. The tendency often is to cling to the old and tested, however, until evidence is brought to convince the appropriate authorities that better wasy can be found The leaders in medical education have understandably preferred the methods of their experience, the medical colleges of France, Germany, England or wherever they spent their formative years They know these were of a different time for a different culture but have assumed that they would do because a good doctor is always the desired end-product The time may be ripe for a review and reform similar to the famous Flexner survey which changed the whole pattern of medical education in the United States fifty years ago.

Certainly there is an immediate incentive for improvement in the planning of new medical colleges. It is almost foolish to start a new institution in a country in desperate need of doctors when the same mistakes are guaranteed by the nature of its organization. The first question in Syria or Ethiopia or Tunisia or Saudi Arabia is not What kind of a doctor? It is How can we meet the country's needs? The planners cannot proceed sensibly with the details of admission, curriculum, and examination until the Ministries of the Government have come to recognize their own goals and make the change needed to meet them. If the rules and regulations which discourage a health service are modified, there can be an appropriate change in the college being formed and, with more difficulty, changes in those already in existence.

WHO can play a prominent rôle in such developments. It can bring together an experienced body of medical educators to do more than make general recommendations It can establish some real guidelines for the colleges of the future for this Region and provide them with powerful proof of their pertinence to the health problems of the nation. It can offer active consultation in the formation of new colleges in the light of these guidelines, strengthening the hands of the officials who are striving for good results. It can encourage leaders of medicine in the whole Region to combine their strength and wisdom to persuade their non-medical officials to support them in their work.

At this time, however, neither WHO nor any other agency can provide what is greatly needed to achieve the best possible results. Experimentation requires bold skills which cannot be found, or if found, cannot be supported, in any one country of the Region. There is a clear need for experimentation in medical teaching This may be done rather timidly here and there in one department or another under present circumstances. It may be done with results of profound importance within and beyond this Region by the creation of a complete institution for that very purpose.

The institution could attract broad financial support. It could employ a variety of approaches to the problems which concern us. For example, it could begin by a plan to integrate classwork with the community. It could establish the most effective methods for including preventive medicine in the curriculum; it could test the results of eliminating private practice for the entire faculty; it could determine the hours really needed to teach anatomy or physiology and whether there is a place for sociology or public administration

in the course of studies. It could strive towards the elimination of cumbersome procedures which steal from professional time; it could show the economic advantages of good hospital organization. It could demonstrate the value of vital statistics in all planning It could use many consultants to experiment in medical pedagogy itself, again as an immediate reflection of the regional needs Without such a laboratory, progress will be very slow, based chiefly on empirical trials with poor means for testing results.

Even the preparation for such an institution provides the means for better learning The Teheran Conference brought in many reports on the systems of medical teaching of the Region and considerable discussion of national problems.

The medical college reviews were primarily descriptive of the intentions rather than the actualities. They did not include any analysis of the time actually spent in teaching, the qualifications of both senior and junior staff, the rate of turnover, the quality of research, the abilities of graduates, or the fitness of the programme for the country Health and allied governmental problems were reviewed without the specificity of vital statistics and again were summaries of intentions rather than actualities

A critical survey of medical education on a country and regional basis is a necessary preparation for institution-planning It is also necessary for any reform efforts in the existing or planned colleges This is a task which is obviously very sensitive but the rewards are worth the risk, especially if accuracy is combined with diplomacy. When such a review is held against the needs and plans of the Region, fundamental changes will suggest themselves. Further improvements

in planning will follow as a somewhat idealized institution is outlined and finally brought into creation. Such preparations, carried out deliberately, will encourage acceptance of concepts which would otherwise be thought too radical. It is not unlikely that medical colleges which are now drifting discontentedly will themselves take the lead in establishing internal changes.

What is presently most practical is a semi-permanent body headed by WHO's experts on medical education They can guide the kind of intense study needed for a reform in medical teaching at all levels Even if the goal of a new institution is not reached soon, a highly favourable result can be anticipated from the review and planning itself. The most striking expression of the Teheran Conference was not the community of problems, but the unvoiced need for leadership.

MEDICAL CURRICULUM AND THE PRACTICE OF MEDICINE

by

Professor M.A. Shah
Chairman, Academic Council
Professor and Head of Ophthalmology,
Dow Medical College, Karachi

It is a self-evident truth that medical education is not like "art for art's sake". It has a utilitarian purpose, i e. the doctors produced are expected to tackle the health problems of the country It is equally evident that they can only do so if they prepare themselves to tackle these problems during their days of medical studies.

Doctors work, inter alia, in the following situations

a) In medical teaching institutions
b) In urban areas as private practitioners.
c) In rural areas.

Inasmuch as 90% of Pakistan's population live in villages, it would be reasonable to expect that a doctor's training should have a pronounced bias towards preparing him for the problems which he may encounter in rural areas

Special problems in rural areas, as distinct from those in urban communities, pertain largely, if not mostly, to the field of preventive medicine. In curative medicine, the problems in rural and urban areas would appear to be the same, and therefore training, in this respect, need not be different.

Leaving aside preventive medicine (which is taught as a basic science discipline which, like any other basic science, the student learns in order to pass the examination and forgets immediately afterwards), the problems of curative medicine to which he has been initiated in the big teaching hospitals, are not exactly the same as those he faces either in urban or rural areas.

During his clinical training, the student has been posted to various so-called departments where he comes across cases belonging to that particular section of medicine only Even in an outpatient department his acquaintance, while he is in that outpatient department, is with diseases of that particular speciality and with no others. He is mostly unaware of behind-the-scene activity which furnishes all the information, on which his teacher relies when discussing the cases. He becomes more interested in the discussion of his teacher than in its basis

It is inherent in the system that, while a student is in a particular clinical department, the teachers can only attempt to impart knowledge from the point of view of their own speciality. It appears that the assumption behind the present curriculum is that if one teaches segments of medicine, the student, when he becomes a doctor, will be able to put these segments together and make the whole (of medicine). This is an invalid assumption. The student has not learnt the segments If his experience in the medical school has been at all successful, he has only been put on the road to learn, as he goes along and with adequate continued guidance, something about the segments he has been introduced to

However, the conditions in which he subsequently finds himself either in the rural or in the urban areas, do not permit him to put into practice what he has learnt in individual departments at his medical school, let alone encourage him to synthesize the segments of this knowledge into a whole.

For these and a variety of other reasons, he is likely to degenerate into practising something which is not scientific medicine

Learning by the present-day curriculum can be justified only on one ground viz. that all the students after graduation, are drafted to various departments of big, preferably teaching, hospitals, into various specialities and remain for the rest of their lives in those particular specialities. In other words, the present curriculum is designed to produce (in the long run, long after graduation, by further work in particular departments) specialists and nothing else. This view receives further support from our experience in Pakistan, that the vast majority of our medical graduates who are taken up on the house staff of teaching hospitals, and have opportunities for postgraduate studies do as well as, if not better than, students anywhere else, as far as practice of scientific medicine in their own specialities is concerned

The current curriculum, with very minor and superficial alterations mostly unfortunate, is in no way different from the one followed in the United Kingdom (particularly Edinburgh) at the beginning of the century. Its products are, as stated above, eminently fitted, to be absorbed into medical teaching hospitals. In the past this probably was the main aim. For rural medical work,

half-baked doctors (called licenciates) were produced by institutions with indifferent standards, and short courses. Some of these licenciates, no doubt, rose to great heights in their profession but that certainly was not the result of their training. Since independence, however, medical schools producing licenciates have been gradually abolished, or upgraded, resulting in only one type of medical man, a graduate coming out of a university.

The situation at present then is that we are producing doctors fitted to be employed only in big teaching institutions, etc., and none would appear to be available for looking into the curative health needs of either rural or urban areas by the practice of scientific medicine.

It is not only the shortage of trained medical personnel which is responsible for defective medical cover, in the scientific sense of the term, to the majority of the population. Even with the increase in the number of medical colleges and consequent increase in number of doctors being made available, the tendency is still for them to settle in urban areas Here some fortunate ones are able to put into practice what they had learnt in teaching hospitals, while others adjust themselves to circumstances and do private practice of a sort A fresh medical graduate can be relied upon to have a fairly good idea of the conditions in villages, and it would perhaps be perfectly honest on his part to try and practise what he has learnt in places where he feels such practice to be possible Such places are obviously teaching institutions and certain big urban centres To that extent it may possibly be naïve to expect that when a point of saturation will be reached in urban areas the doctors will start moving to villages. They might; but would they be practising

scientific medicine there for which they have undergone a strenuous course and spent so much of their own and the State's money? If time, money and effort expended in producing scientific medical personnel is not to be wasted, logic would appear to dictate their utilization only in places where they could use their knowledge and skill to the maximum extent. This would logically mean the establishment of big hospitals everywhere in the country, both rural and urban areas Obviously such a suggestion would be nothing more than wishful thinking of a most unrealistic nature

-- If the products of our medical institutes then, cannot be economically utilized to tackle the health problems of the vast majority of the country scientifically, can we not look into the possibility of training doctors for the work they may be expected to do, rather than keep on training them, in increasing numbers, for situations which not only do not exist but are also not likely to exist in the foreseeable future?

What are the curative medical problems that a doctor faces outside a teaching institution?

The Regional Directors of Health of the six regions of West Pakistan (excluding Karachi) were requested to furnish information, for any particular year, on the first fifty common diseases in their regions. It is not the purpose of this paper to present any statistical analysis, for the information requested was solely to indicate the relative frequency of surgical and medical groups of diseases. In the medical group were also included diseases of the skin and infectious diseases, while in the surgical group, in addition to recognized general surgical conditions and traumatology, were included diseases of the eye, ear, nose and throat, gynaecology, venereal diseases and also obstetrics The relative frequency of these groups is given hereafter

Region	Surgical Conditions %	Medical Conditions %
I	12 41	87 59
II	37 84	62.16
III	42 64	57 36
IV	45 90	54.10
V	37 51	62 49
VI	22.47	77 53
TOTAL %	33.13	66.87

It will be seen that nearly 67% of the problems likely to be encountered by the prospective doctor pertain to the medical group of diseases and only 33% to the surgical group of conditions

An analysis of the curriculum being followed in the medical institutions of this area shows that approximately 60% of the total time devoted to clinical studies (theory, demonstrations and hospital practice) is given to the surgical group of subjects and 40% to the medical group

While it is not suggested that the time spent on training for any group of diseases, surgical or medical, should be in exact proportion to the prevalence of these diseases, it does appear fairly obvious that more attention would seem to be required than is being given at present in training the student in the medical group of

diseases; for, after all, most of his practice is likely to be in this field It is also in this field that he can do maximum good to his patients because, unlike most of the surgical group of diseases, having once diagnosed a case, he can proceed at once to treat him.

It is, therefore, recommended that the curriculum be so altered as to attain the above objectives. In the surgical group of diseases, attention need only be paid to acute emergencies, differential diagnosis and traumatology, thus releasing urgently needed time for a more thorough study of the medical group of diseases

If what is written above is considered reasonable, how can the curriculum be changed? Millions are being spent on running medical institutions and the State must first be satisfied that the radical changes in the curriculum, advocated above, would in fact give them better scientific medical manpower capable of solving effectively the curative health problems of the population. Any change in the established pattern, however, requires to be tested and found better, before it can be adopted. It was with this and other ideas in view, that the creation of an international undergraduate medical institute was suggested by me at the Conference on Medical Education in the Eastern Mediterranean Region, held in Teheran in 1962 Such an institute could act as a pilot project, a sort of crucible where well thought-out ideas on medical education could be tried, tested, adopted or rejected with the least risk to any member country. As players cannot be expected to watch the game, a separate department of medical education in the proposed institute could plan, organize, execute and evaluate research projects, not only in matters of curriculum, but on a host of other topices crying out for elucidation Recommendations

emanating from such a source, based as they would be on the results of scientific experimentation and evaluation would, it is believed, have a greater chance of carrying conviction than the rather nebulous outcome of a hitherto mostly theoretical (and sometimes almost conjectural) approach to these vital problems. Such a step would also be in keeping with the traditions of a profession that has consistently placed utmost reliance on scientific experimental approach for the solution of its problems.

Without being unmindful of the difficulties involved in the establishment of such an institution, the proposal is once again renewed, along with the advice given by John Hunter to Edward Jenner Why think? Why not try the experiment?"

ON MEDICAL EDUCATION IN LEBANON AND THE EASTERN MEDITERRANEAN REGION

by

Samuel B. Kirkwood, M.D
Dean, Faculties of Medical Sciences
American University of Beirut

1 What are the results of the Teheran Conference as far as your own country is concerned?

Few up to the present; ultimately, wide-ranging and of the greatest significance.

Lebanon has two old and well established medical schools, a government health service, a large number of practising physicians, modern facilities, and a general educational system that reaches its total population through numbers of public and private schools. One million five hundred thousand people live in the country, roughly distributed one third each in Beirut, in other cities, and in the rural areas. Roads are good throughout the land and there are adequate means of transportation

The French Faculty of Medicine of St. Joseph University throughout its long and outstanding service has produced the bulk of the practitioners of medicine in Lebanon. Teaching is in French, based upon the concepts developed in the great universities and clinics of France, where at some time during their careers most of the staff have studied In general the graduates of this Faculty have tended toward general practice, though many of the leading specialists of Beirut are also from this school. Its students intern at the Hôtel Dieu in Beirut and at Government hospitals throughout Lebanon

The American University of Beirut, in its century of existence, has graduated a smaller number of physicians who have for the most part turned to specialization, and many have migrated to other countries of the Middle East, Europe, and the United States. Its faculty have received their advanced training in American and English schools for the most part, and the language of instruction, therefore, is English. The methods of teaching are patterned closely after those followed in the American medical schools. This can be done easily because the four schools of its Medical Faculties and its teaching hospital are under the same staff control, and a major portion of the staff is on full-time appointment.

The Government of Lebanon maintains several hospitals throughout the country for care of the medically indigent. Laws affecting medical education are administered largely through the Ministry of Education, but no national medical school exists.

The actual number of practising physicians in Lebanon is considerable in relation to the size of the country and to the population. There are gaps in the coverage of specialties and many of these fields have little depth in well-trained personnel The critical factor, however, is distribution --- far too much concentration in the urban centres.

Hospitals range from modern well-equippedstructures to older ones with standard or sub-standard facilities Much private practice is conducted in small private institutions.

The general orientation of the secondary school system is to the French baccalaureate The American University Medical School admits its students almost entirely from its own Faculty of Arts and Science pre-medical course.

Tangible, direct results of the Teheran Conference cannot be identified easily. But its influence nevertheless is clearly evident. Many concepts, in tentative form before the Conference, found support there and have been pushed in Lebanon with greater vigour since Some new opportunities have been afforded, permitting ideas caught at the Conference to stimulate pending projects.

The annual Middle East Medical Assembly is being reorganized, somewhat on the pattern of the Conference with its main sessions and subsidiary study groups. The development of co-ordinate research programmes between the two schools in Beirut is under discussion, with one timely project actually in progress - a study of cancer control. A step of great significance was taken by the Government of Lebanon and its scientists in forming the Lebanese National Research Council, organized to give grant support to research projects within the country. Much of this, it is hoped, will be in the medical field. Both schools met recently with the Medical School of Damascus to determine possible sharing of teachers --- or even students --- to broaden the reach of outstanding departments, otherwise confined to one school alone. Consultation between the environmental health staff at the American University School of Public Health and the Palasht Sanitarian School of the Ministry of Health of Iran has brought mutually advantageous teaching opportunities.

In a direct sense, the Conference did not alone stimulate even these activities, but the opportunity it gave to hold ideas up to the scrutiny of critical colleagues was invaluable. These thoughts, formed and fired in discussion, will find ultimate realization.

2. What are the particularly outstanding problems in medical education in your own country and possibilities and suggestions for solutions?

Lebanon has its own problems of medical education, and shares, in a particular way, those of the region.

Its major internal question is basic -- what kind of a physician does Lebanon need? In spite of its many practitioners, taught in its own schools and elsewhere, medical care is far from what it could be. Some people receive excellent care and some have little. Some through ignorance die without proper attention and others close by fall ill of diseases with the means of prevention at hand. It is not likely that the future can be improved by the same kind of care. Or, to put it another way, is the training of the general practitioner and the specialist as it has been given, up to the present time, in need only of some further refining to meet future requirements? Or is the need for a new kind of physician, differently trained and re-oriented to practice?

Because of its geographical stand throughout the ages at the entrance to the Middle East, Lebanon bears a somewhat special relationship to its regional neighbours It is a small country and one through which many of the trade and cultural routes of the East are concentrated. In medical education it is the same. For decades it has received students from the entire region, has trained them, and returned them to their own countries A fair portion of its own Lebanese students have emigrated to other Middle Eastern lands. They have become practitioners, educators, and health officers. If the questions raised above apply to Lebanon itself, they also bear in the same way upon the future needs of these regional countries. What kind of training is needed by the Middle Eastern students studying in Lebanon to enable them to take useful places in their homelands?

Many factors will determine the ultimate organization of the medical service of Lebanon and the region. How individual physicians and health workers can be brought into an efficient, co-ordinated operation is the task facing the medical leadership of the coming years. The means are not entirely apparent, but certain fundamental attributes required of each physician in this development will at least identify the kind of training he must be given

His professional technical capability needs to be of the highest quality --- and training that sacrifices quality to quantity will fail. His practices must rest on sound scientific principle and traditional empiricism offers no such base. Research and the inquiring mind will support a continuing growth of technical knowledge complacent self-satisfaction is the alternative. A deep sense of personal responsibility for his patients' welfare is the key to his character --- this his teachers can give him only through their own example.

This physician will work under a different concept, one marked by a sense of the totality of health.

For centuries the basic, and, in most instances, the only approach to medical care, was the after-the-fact recognition of disease or injury. Medical efforts were directed almost exclusively toward restoring an individual to his normal state of health The early activities of public health workers, on the other hand, were directed toward a mass attack on disease in a hostile environment in which the individual person was merely one small element. Time has altered this approach, however, and now an opposite state has been reached. Such public health programmes as rehabilitation, in purpose, restore an individual patient to a useful life in the community, and the

private physician has come to realize that the health of the community in which he practises is very much a part of his own concern. It would seem reasonable, then, to discard the terms "curative medicine" and "public health" and to speak only of the total health in a community --- as the sum total of the health of its individuals.

In this concept the mere saving of lives no longer can be accepted as the ultimate aim of medical care. Reduction of illness becomes the next logical goal and, finally, the greatest opportunity of all is to develop an environment of such positive good health that disease and injury are minimal factors.

In short, prevention has been added to cure, and the world is now on the threshold of the age of "health production" as the new motivation of medical service.

These concepts cannot be developed through medical teaching alone. Some receptiveness --- innate perhaps --- on the part of the student himself is a prerequisite, and his background pre-medical studies are also pertinent Medical educators will do well in choosing their entering classes to examine carefully and with open minds and critical questions the criteria upon which they base their judgments. If medicine is an art as well as a science, if it is not a mere vocation, a broad base in the humanities is needed as much as science. The medical men of the ancient Middle East were philosophers of wide-ranging thought. There is something to be said for the point that the man who would heal others must understand his fellows. If their lives are bound up in writing and poetry, painting or business, then the physician, too needs an acquaintance with these subjects. Certainly science study in a pre-medical period is necessary, but to what degree and of what type remain open questions.

The trilogy of biology, chemistry, and physics will undoubtedly continue. But is a new emphasis on mathematics of value when so much of medical care today rests on accurate statistical analysis? What of an increased attention to psychology in the face of so much phychosomatic disease? Will the study of social or behavioural sciences be a help, recognizing that people today live and fall ill not by themselves but in a world of complex social inter-relations. And, certainly, without a willingness to work hard, to sacrifice personal desires and pleasures, to live a life of service, to believe in the dignity of the individual man, no student will succeed as a physician.

The training of the physician described requires a strong undergraduate medical course. Many arrangements of curriculum and methods of teaching will lead to similar good results, but some are fundamental

1) A rational, logical approach to diagnosis and ultimate treatment, that begins with a knowledge of basic normal physiology and proceeds to the recognition of signs and symptoms as indicators of altered function, with therapy then following as a natural consequence

2) A reliance upon the laboratory as a source of help.

3) An approach to the patient as a human person who must be studied and treated not as a "case" in the hospital but as an individual living and working in a family and a community.

4) A flexibility in the arrangement of courses that will cross over artificial divisions between departments.

5) An integration of studies into area-groups that will bring a concept of the totality of community health into a tangible reality --- for instance, a grouping of the Departments of Obstetrics and Paediatrics in the Medical School and the Department of Maternal and Child Health in the School of Public Health into a co-ordinated teaching and research unit.

6) The use of the hospital as the exchange point between the school on one side and the community on the other and, therefore, as a sharp focus for the final training of the student.

7) A conscious and planned exposure of the student to the operation of paramedical and auxiliary personnel in medical service.

8) An introduction of the principles of research as a continuing part and support of medical practice.

9) An extension into the liberal arts faculty for teaching in the social and behavioural sciences, genetics, philosophy

The overall purpose of this kind of an undergraduate programme is evident. In it the student from the beginning of his course may be trained to think rather than to memorize, to observe rather than to speculate, and to see patients as people in an environment of their own.

Equally important is the development of a reoriented graduate programme, for the essence of these concepts is that the physician accept a responsibility for life-long study Post-graduate teaching,

therefore, falls properly into the orbit of the medical school. The curriculum here is infinitely varied, but the areas of the school's responsibility are fairly well defined.

1) Advanced training for graduate students, particularly those who will return to their own countries as members of their medical faculties.

2) Advanced study in the clinical specialties, particularly for the graduate interns who may wish to enter the residency training programme --- which might well be extended to residencies in the basic sciences as well.

3) Short refresher courses, seminars, workshops, symposia, and ad hoc discussion groups largely for the continuation phase of the practitioner's education after graduation.

4) Roving, extension courses held in outside areas --- both in cities and rural regions --- to reach the physicians unable to come to the Lebanon.

5) Consultation services.

6) Research facilities for investigations into the basic and clinical sciences, and educational and community studies.

The advantage of a University setting is apparent, especially one with all elements of the health programme present --- medicine, public health, pharmacy, nursing, dentistry --- Lebanon provides this.

Consultation services are basically teaching functions, but they carry also a sense of the school's responsibility to its community. They extend the usefulness of the faculty specialists to assist in patient care throughout the area and provide an essential link in

tying the outlying practitioner to the medical centre. Consultations with national medical school staffs in problems of medical education and with local health officers in matters of community health services mark further the regional contribution of a centre in Lebanon Even the research activities of the centre are pertinent. For instance, an investigation into practical and efficient means for bringing quality health care to the peripheral areas of the Middle East would be of wide value In such a work the school might well provide the answer to the original question. Is the new physician to work in the same manner as before? The kind of structure within the community in which he will find his place may well have originated in the academic laboratories.

Both for itself and, to the extent of its capabilities, for the Region, planning in Lebanon is being directed toward these problems in educating the future physicians A possible answer lies in these developments

1) An improved undergraduate programme in medicine, public health, nursing, pharmacy, and dentistry.

2) An expanded graduate programme

3) A centre for research

4) An intensified approach to community care

5) A regional orientation

3. <u>What is the rôle of the World Health Organization in further assisting the Region as a whole and countries individually</u>?

If the discussion given above is valid, the assistance of WHO in this programme for the coming years will be of greatest value if it can follow in rough outline the concepts indicated. WHO has

at its disposal personnel, funds, and influence In the patterns presented above, WHO would continue much of what it has been doing, will change some of it, and will make some new excursions. Admittedly these following suggestions do not attempt to cover all possibilities

1. A study of possible areas of standardization in medical education --- at two points. First, at the stage of entrance to medical school proper It would seem that some minimum level of background study and competence is necessary if the programme outlined is to be effectively and efficiently taught in the time available to the medical school There should be no attempt to dictate curricula of preliminary education, but the student's knowledge and attitude should contain at this critical point at least a basic common core. What this is remains the question to be answered. Second, at the stage of entrance to medical practice Again without any attempt to restrain the variety of teaching between the two points in question, some common level of ability must be reached before the student physician can safely become the practising physician The standards to be followed here are worth further study An extension of this, of course, becomes important when the practising physician choses to set himself up as a specialist. There are vital legal, community, and professional principles involved at all of these critical points Much good thought needs to be applied. WHO with its staff of professionals, access to world-wide professional resources, and a quasi-governmental position seems to be in an unusually advantageous place to sponsor such thinking

2. The kind of educational programme suggested cannot be developed without much examination, revision, trial and error. Into all these processes, the injection of the ideas of resource experts has great value WHO has served admirably in this type of activity in the past. The future will require much more. It is a hope that WHO's budget may in a practical way reflect the increased need for visits by its own staff and by other experts from abroad. Many more of these consultations in the future will need to bear on specific problems of medical education

3. To a degree the same requirements can be met --- in supplement, not substitution --- by an exchange of faculty among the schools of the region itself. Lacking are a ready means of setting up such arrangements and travel funds. WHO within its limits could help in both

4. The programme described depends heavily upon a concept of research as an essential and integral part of medical education. This has not been the general or traditional attitude of the institutions of the region Even though this may now be accepted as belief, there is much to be done in translating this idea to organized research projects. Again, WHO with its resource personnel can play a vital rôle, not so much in identifying or supporting specific studies, but in providing help in establishing valid research procedures.

technical principles and providing diagnostic and therapeutic knowledge and tools in order to assist the medical man in the application of scientific knowledge and well-developed skills.

(d) Local training as soon as possible for interns, paramedical personnel (nursing, laboratory assistants, etc.), auxiliary personnel, with a young national doctor taking over the responsibility for their training

(e) Promotion of experience of young national doctors first at the lower level with provincial and municipal health services in order to make them ready to step into more responsible positions, preferably preceded also by a postgraduate course.

24. An experiment in undergraduate teaching with a view to arousing interest in basic medical sciences was started in 1961 in Israel. Undergraduate education is provided for students from developing countries mainly for educating and training future teachers and research workers in basic medical sciences to be the backbone of their country's corps of medical educators It goes without saying that teachers in clinical subjects are easier to form than teachers of basic medical sciences.

25 Assistance to postgraduate educational institutions, particularly in the field of public health, is being concentrated in a few places and countries of this Region. Doctors who have to get their postgraduate experience outside this Region are still in the majority. One of the national institutions which has developed well is the High Institute of Public Health in Alexandria, which is already receiving WHO fellows from other countries and arranged with WHO assistance, an inter regional course in occupational health in 1961

doctor ratio and potentially provide equal medical service, yet those same countries differ widely in educational standards and in the use and distribution of their national doctors Some of these countries may depend entirely on foreign physicians; others may have a fair number of national physicians, but trained abroad

23. Obviously many other factors enter into play which may be responsible for fundamental differences. From the educational point of view, however, the potentialities of countries in the third category need to be developed step by step, according to the following outline, although it is not possible here to give clear indications as to the speed and time needed to reach each one of the objectives

(a) Preparation of young doctors for service and making a pre-selection according to personal aptitude, attitude and academic achievements to identify candidates for additional experience to prepare them as academic teachers through fellowships. At the same time the undergraduate fellowships programme needs to be continued.

(b) Assistance to central servicing health and medical institutions in the country itself (e.g. public health laboratories, a central hospital with its servicing departments) in order to bring them up to a reasonable standard, and preparing nationals as "counterparts" for the important posts to be taken over by them as soon as they are fully experienced. (See also under (a)).

(c) Preparation of other paramedical and health personnel necessary to run medical and health establishments on satisfactory

(d) Material assistance from WHO is rather limited. However, advisory assistance in ordering and installing equipment and supplies, as well as teaching aids will be made available on request Advice on physical facilities may also be provided and it should be stressed that in the case of hospitals in general and teaching hospitals in particular, the following should always be consulted; the medical administrator and his staff (particularly nursing staff) on the functional needs; the architect, on the best construction to fill these needs; the engineer to ensure the best installations from a technical point of view

(e) The internship training of the young doctors which is largely being done abroad should be undertaken as soon as feasible in the social and cultural environment of the student's own country Adequate hospital facilities, medical and nursing care standards, qualified specialist services and supervision are prerequisites. The forms of assistance mentioned above should be helpful in this respect

(f) One governmental administrative tool that should not be forgotten, is legislation. The objectives of medical education are helpful in outlining the various types of medical activities which will be the tasks of the doctors. Their rights, obligations, conditions for exercising the profession need to be stated and protected as well as the needs of the public

21 Countries in the third category, that is, those with practically no medical doctors, still have far to go before they are in a position to think realistically about promoting medical education

22 It may be pointed out in order to illustrate the diversity of the problem that the population/doctor ratio may not necessarily give a clear picture of the situation. For instance, certain countries in the three separate categories may have nearly the same population/

(a) Visits and consultations through either consultative groups or a Regional Adviser to study developments in these countries and to keep in touch with the responsible planners. An important point in this respect is the building up of a central hospital as a teaching hospital, to be staffed with sufficient and competent staff, medical and nursing and para-medical.

(b) The preparation of nursing personnel and technicians (laboratory, X-ray, etc) and librarians This cannot be sufficiently stressed, and courses are being planned on an intercountry basis for some of these groups of personnel (particularly to prepare tutors and supervisors), so that each country should be able after a certain time to provide itself with competent paramedical staff. It should be emphasized, however, that the first step in this direction should be to turn out a limited number of well qualified persons rather than a large number with a low level of training. This is particularly important in preparing for future teaching activities.

(c) The preparation of academic staff, which should in all cases be supported through fellowships. It is suggested that each of those countries in the second category which are seriously thinking of establishing medical educational institutions should request and be given assistance for a limited period of time for the preparation of staff. In line with experience as well as with the concept of WHO's assistance, priority should be given to the preparation of teachers for basic sciences and social and preventive medicine However, clinical fields are not excluded.

18. Another plan that it is hoped may be realized during the next five years is for the exchange of qualified professors within the Region so that institutions may benefit from the particular scientific research and teaching experience of highly competent professors. The idea is not only to bring through them knowledge and skills in a narrow specialized field, but to provide an opportunity for colleagues in related fields to exchange ideas and to develop balanced and co-ordinated programmes of teaching and methods of teaching. Finally, during the next five years the organization of national conferences on medical education will be encouraged as well as the creation of standing curriculum committes or similar bodies keeping a continuous eye on the development of medical education.

19 The assistance in undergraduate medical education to the second category of countries - those with no medical faculties, but an important group of well educated doctors - has up to now largely consisted in giving fellowships for specialized and postgraduate studies to doctors In one country, Tunisia, one and a half years ago, a medical consultative group made a survey and a report was submitted to the Government, as a guide-line for the future establishment of a medical faculty. Furthermore, since last year, fellowships are being given yearly to two young Tunisian doctors to enable them to be trained and qualified to serve on the teaching staff of the medical school.

20. What is the programme to be recommended for WHO assistance to countries in the second category during the next five years?

15. WHO assistance to the existing medical colleges is limited. However, one project carried out during the period under review should be especially mentioned a medical education consultative group which, at the invitation of the Government of Iraq, visited Baghdad and Mosul. The group consisted of a Professor of Basic Medical Sciences, a Professor of Clinical Medicine and a Professor of Social and Preventive Medicine. The report is now under discussion and consideration by the national authorities.

16. Assistance in previous years to countries in the first category was mainly in the following forms visiting professors, teaching missions, individual consultants or consultative groups, and occasional fellowships. Present thinking, and experience with previous projects, show that the emphasis is placed correctly on small WHO consultative groups for individual countries or medical faculties as well as larger inter-country meetings to discuss freely the situation and needs in medical education. This is certainly more in line with the Organization's policy than to fill a university chair by a foreign professor.

17. The programme for countries in the first category during the next five years will be centred on consultant services in medical education to establish a close link with all medical faculties and colleges, and provide information and advice on the development in the Region as well as elsewhere. It is planned to provide consultants or a permanent medical education adviser in the Regional Office who will prepare and issue to all professors, special information, reports not otherwise available, etc., covering important aspects of medical education.

for other professions might not exist, e.g. for nurses. This may account for the highly complex problem of medical care services, particularly in teaching hospitals, a problem which is influenced by numerous factors.

12. In the second category are those countries, which are not yet able to build up and finance their own educational institutions (particularly medical faculties), yet have a rather well developed basic school system with secondary schools and a corps of professional workers educated abroad. Therefore, medical and health administrators, supervisors, particularly in the medical category, are available, as well as practising doctors and some specialists. It must again be emphasized that wide variations exist in the number of doctors, their age and hence their experience the number of students studying abroad and the population/doctor ratio.

13 In the third category are those countries which have practically no trained national physicians. There may or may not be a few younger people who have returned after finishing their studies abroad, but in any case they are neither quantitatively nor qualitatively able to play a leading rôle in the medical and health services of their country.

MEDICAL EDUCATION AND ASSISTANCE TO EDUCATIONAL INSTITUTIONS

14. At present there exist twenty-seven medical school or colleges in the Regional countries. Eighteen of these schools, have been created during the last twenty years. Three more medical schools are expected to be established soon in two countries which already have medical faculties

ANNEX I

BACKGROUND MATERIAL

1. Extract from Annual Report of the Director to the Regional Committee 1961 - 62 (EM/RC12/2)

II ADVISORY AND TECHNICAL SERVICES

EDUCATION AND TRAINING

GENERAL

9 Although with few exceptions, the economic and social conditions of countries of the Region are fundamentally the same, there is a marked difference in resources, educational facilities and availability of trained personnel

10 Thus, in analyzing past programmes, present projects and future plans in the field of education and training, there are no general criteria to follow for all countries of the Region and they will therefore be grouped roughly into three categories according to their circumstances This may mean of course that full justice is not always given to a particular situation, but this is part of the nature of abstracting facts and features in social processes

11 In the first category are those countries which have academic undergraduate institutions, and in certain cases a variety of post-graduate training facilities They therefore have at their disposal highly qualified and experienced public health administrators, practising doctors, teachers and large numbers of supervisory personnel, at least in certain professional groups. This particularly applies to the medical profession, whereas training facilities

as well as their fields of interest, is of great importance. It would facilitate the communication among individuals with similar interests.

5. Research Grants

WHO is already providing a substantial assistance in this respect However, the total amount may be increased. Certain investigators may also be helped by suggestions about the different sources of funds that may be available through foundations and other agencies.

6. Many medical schools are in need of assistance in obtaining the recent medical books and periodicals because of lack of funds and shortage of foreign currency. There is also a need for the presence of well-informed medical librarians in most schools. WHO may be able to assist in meeting these demands.

All of these items may well come under the jurisdication of the proposed educational consultative panel and the WHO full-time expert in medical education The soil is fertile and the time is ripe. With co-operation, exchange of ideas and emphasis on research and teaching standards, great progress will be forthcoming in the near future.

h) Provision of fellowships for young medical graduates who may benefit from a period of training in a Regional centre.

i) Consideration of admission of students of one faculty into another faculty within the Region, and also admission of students who are studying abroad to the faculties in their own countries.

2. The Organization of Regional Institutes

Young physicians and para-medical personnel from all the countries in the Region may equally benefit from Regional institutes particularly in the fields of preventive medicine, paediatrics and obstetrics

3. The Establishment of a Regional Medical Faculty

A model medical school which would strive for excellence yet have a local flavour is needed. Such an institution should be located in an area where a good deal of integration exists among the various health agencies and the medical school. The soxio-economic as well as medical problems of the community may then be studied The students who may be the future leaders of medical education in their own countries, would take these ideas back home and try to implement them This kind of medical school may serve as the best laboratory in medical education for experimenting different ideas on pre-medical training, admission methods, examinations, curricula, research, full-time, policies and postgraduate education

4. Regional Medical Directory

A directory of medical schools and other institutions in the Region, listing the faculty members, their background and qualifications

educators in the Region to advise and assist the various countries in organizing new medical schools as well as maintaining and improving the standards of already existing institutions. This assistance would be given only when the member countries request it. The panel may be assisted by a full-time person in the Regional Office. He would call on the members individually or in groups, whenever the occasion arises for their assistance. This panel may accomplish the following purposes

a) Formulation of minimum standards of medical education.
b) Advice on medical curriculum
c) Advice on recruitment of faculty members.
d) Advice on policy decisions
e) Provision of certain amount of exchange among the faculties of different schools in the Region, so that they can come in contact with their colleagues and learn about one another's research and educational interests
f) Provision of visitors; a two or three weeks' visit by active investigators to a department may stimulate research interest of teaching staff and even facilitate the establishment and operation of laboratories engaged in investigations of local importance.
g) Medical publications of this Region may be compiled by this panel and circulated for the use of various interested individuals This may help the medical educators in this Region to learn more about one another's interests and activities.

Similarly, the Government authorities may think of ways and means of utilizing these young physicians in the teaching hospitals, medical school basic science departments and in the community. A part of this period should be (by specific legislation) spent in serving rural areas.

II SOME SUGGESTIONS ABOUT THE POSSIBLE ASSISTANCE OF WHO EASTERN MEDITERRANEAN REGIONAL OFFICE FOR THE ACHIEVEMENT OF THE GOALS IN MEDICAL EDUCATION

Medical education is a very expensive proposition. According to recent estimates, it costs about ten million dollars to build a medical school and one to two million dollars a year to operate one, although the cost may vary from one country to another. Often, this fact is not appreciated by governments or universities undertaking the responsibility of organizing a new medical college, and medical educators have to lower their standards because of financial obstacles. It would be instructive to know the medical school budgets in countries of the Region and examine their adequacy. Investments in medical care and education are economically sound as they increase the well-being and productivity of individual citizens It may be desirable if WHO would take certain measures to bring these facts and figures to the attention of various governments in the Region and to ask for their helpful assistance.

There are certain other specific items that are worthy of consideration.

1. Regional consultative group on medical education

To ensure the continuity of studies on medical education which will be discussed during the forthcoming Meeting, the Regional Office may arrange a panel composed of some well-known medical

our medical education and care, we must place a proper value and emphasis on research. To begin with, small problems can be tackled; gradually these would lead into more complex and important projects Research would even save money in the long run.

8. Prevention of Loss of Manpower to Countries outside the Region

It is perfectly acceptable, in fact commendable, that young doctors go abroad for further training However, this must be done at the right stage in their education and maturity. If the young physicians end up in a centre abroad that is not well organized for teaching, there is no educational value resulting from their years of hard work If they are too immature and not familiar with the needs of their own country, they may choose fields of speciality that are absolutely of no value to them or their people, when they return home.

As a result of all this, many of the young doctors from the Middle East, now in the western countries, are bitter because they do not find the proper opportunities at home. Part of this is their own fault, but educators are also to be blamed for not having planned this experience in advance Furthermore, it is a moral if not legal obligation of the young physicians who have been educated almost free of cost, to serve their country and people for a limited period before they embark upon further training that may, in rare cases, make them permanently lost to their nation. Perhaps a period of two or three years in their own country as trainees or practising physicians should be required for each graduating member of the medical school before they are given permission to leave their country for advance training.

and emotional needs of children is essential for all physicians since it is the experience of every general practitioner or even surgeon and specialist in this area, that about half of his patients are made up of children. The question of how the teaching of paediatrics and the organization of the department should be planned as well as the place of paediatrics in the undergraduate and post-graduate medical curriculum, has been thoroughly discussed in the 1961 conference sponsored by the Unitarian Service Committee in Ankara.

7. Research

It is one of the essential functions of a teaching institution to be engaged, throughout its various departments, in research. Many individuals in this part of the world have the tendency to consider research as a luxury instead of a necessity and think that research is something magic, being the right or privilege of highly developed countries, where there is an abundance of funds, personnel, supplies and equipment. It is unfortunately not realized that, although purely biochemical research on a large scale is indeed a costly proposition, medical investigation is not confined to this type. Research means exploration of the unknown; without it the mind stops thinking, the teachers change into machines reproducing words and acts taught to them by others. This is possibly acceptable in vocational schools, but not in universities Furthermore, many of the problems related to health in this part of the world are unique. The more advanced countries have neither access to these problems nor the urge to solve them Even if they become interested in such endeavours, the results are not always applicable to circumstances outside their own culture. If we are to advance

that would bring him in contact with people and society in their realistic form. To throw the great social problems of the community on the shoulders of a young inexperienced student is indeed dangerous. However, the medical school, particularly with direct involvement of the departments of preventive medicine and paediatrics, can embark upon small projects whereby the medical and social problems of a segment of the population would be cared for and studied by them. This experience would do much to integrate in the minds of students the science and art of medicine with the humanities. This would result in better and more community-minded physicians.

5. Teaching of Preventive Medicine

In connection with the above item, the department of preventive medicine can play a major rôle in the formation of the medical students' ideals and outlook. This department must become a major department as recommended by all conferences dealing with health and medical education in this Region. Since the comprehensive proceedings and recommendations of these conferences are available the details will not be discussed here.

6. Teaching of Paediatrics

The proper emphasis on teaching of paediatrics and making it an independent department from internal medicine is essential. If a large segment of the population in this Region, made up of children under twelve years of age, is to receive its proper attention, a major portion of the medical curriculum should be devoted to the teaching of paediatrics. Learning about the medical

3. Outpatient Departments

At the Teheran Conference the value of outpatient teaching was emphasized, as a clinic is closer to the patient's own environment, than the hospital ward; it is also more practical and useful as a model for the future practices of the young physicians. However, the present outpatient departments have little to offer. Indeed, they set poor examples of medical care for the students, because of the lack of space, equipment, teachers and even the possibility of performing adequate physical examinations or taking the most elementary histories on the patients At the same time, these masses of sick people have to be cared for somehow. It is possible to continue the present general outpatient clinics where a large number of patients are seen; but after a proper screening, send a few selected individuals to a separate diagnostic clinic.

It is not difficult to add a small diagnostic outpatient wing to the existing teaching hospitals where the provision of a number of small examining cubicles would enable each student individually to take a good history and perform a physical examination The experienced instructor can then come to the patient's bedside and within a brief period of time, the exchange of ideas between the student and his teacher would lead to valuable conclusions and result in excellent learning experience Such a clinic would also eliminate the necessity of hospitalization for diagnostic purposes in many situations, which can in turn save time and money for all concerned.

4. Rural and Community Health Activities

In order to give the student a true picture of the physicians' responsibilities to the community and his place therein, it is important to give him experiences during the medical school years,

It is recognized that in this part of the world, there is need to train the students as clinicians who are not slaves of the laboratory, but who can use their clinical acumen in arriving at the correct diagnosis, because many of them may not have access to well-equipped laboratories in their practices However, if the student is taught with the idea of correlating the laboratory reports with the clinical findings, each patient for him becomes a textbook The complete follow-up of the patient's progress, both clinical and laboratory-wise, would teach him much about biochemistry, physiology, bacteriology, pathology and pathophysiology. He can then perceive a well-focussed picture of the disease instead of a distorted view. If he has done 100 white blood counts in patients with pneumonia, he does not have to perform the procedure on the 101st case and he can make a more intelligent guess as to what the results would be, than a student who has never had the chance to make these correlations. When he goes out into practice he can use his own judgement to order the essential laboratory procedures, and if it is not possible to perform them, he may assist in the creation of facilities, often not so elaborate, and his practice takes the flavour of modern 20th century medicine founded on scientific reasoning rather than routine mass production of unnecessary and often expensive prescriptions.

If the students are to spend their clinical years on the hospital wards and in the outpatient departments on a full-time basis, from eight in the morning until late in the afternoon, with no more than one or two lectures each day, the patients would have far better care, the records would be kept much more properly and the total amount of learning would be much more, with seeing half as many patients.

indigent patients as "Cases" and not as human beings with feelings and psychological as well as physical needs. Perhaps no more than one-third of the total number of beds should be devoted to private patients.

2. Organization of Teaching Hospital

It was indicated at the Teheran Conference that the teaching hospital must achieve the highest standards of medical care so that it could serve as a model for the student in his future practices Service and teaching, although always mixed with one another, should be distinguished to a certain extent. In an environment where there is a tremendous demand for medical care, the provision of such care cannot be the sole responsibility of the teaching hospital If medical teachers and students are deprived of the leisure for proper exchange of ideas, reading, thinking and research, the perspective is completely lost It is not necessary for the teaching hospital to be very large. Somewhat smaller but better operated hospitals where good clinical records are kept on all patients and the necessary laboratory investigations are carried out adequately, would be of infinitely more teaching value to the students than most of the present teaching hospital wards where there are a large number of poorly treated patients without adequate documentation of their diagnoses or treatments

An important need in the Regional hospitals is a much larger number of house officers and residents. The minor expense of their stipend and maintenance is small in proportion to the quality and quantity of their contributions to patient care and teaching. The training of house staff also forms the most ideal method of post-graduate medical education

b) The incentive plan In this system, the person works in the same manner as a purely full-time member of the staff. He receives a salary commensurate with his seniority and experience. In addition, however, he is given a bonus on a monthly or yearly basis, according to how much contribution he has made to the total income of the teaching hospital in rendering service to the private patients. This bonus usually has a ceiling; otherwise many physicians would spend an unreasonable portion of their time in the care of private patients The limit imposed on their total income would eliminate the danger; beyond this limit, it pays just as much to do research work or teaching

c) The geographic full-time In this scheme the teacher must also stay within the teaching hospital environment on a full-time basis and have no outside practice. He would receive a small basic salary while maintaining an office in the teaching hospital. He would pay for the expenses of his office and secretary, but collect all his medical and surgical professional fees.

The above suggestions presuppose that the teaching hospital accepts private patients. This is desirable; in the first place the teaching hospital is, or at least should be, the best place in the community to receive medical care according to the most recent developments in the medical sciences, and the wealthy patients should not be denied this privilege. Secondly, having private patients around adds an atmosphere of dignity to the environment. Private patients are demanding; they insist on good nursing, courtesy, emotional considerations and a certain amount of hygiene. All of these would serve as a constant controlling mechanism on the nursing and medical staff who may otherwise develop the tendency to treat

and one other member of the department must be full-time since this phase of the students' education is the most important determining factor in his future performance In order to attract and keep outstanding scholars to the basic sciences, there must be the scientific stimulation and the security of a comfortable living. Attending meetings, exchange of ideas with colleagues in the other centres, research and contact with clinical colleagues who may work on projects of mutual interest, make the positions more attractive.

Many of the Regional schools already have a number of full-time basic science teachers. It is important to pay such individuals a minimum acceptable salary so that they can live comfortably and securely. In most instances, double the present salary would be barely considered minima. There may be an incentive plan formulated so that the basic science teachers receive a fixed salary as well as a bonus based on the performance of excellent teaching and research leading to significant publications. This would probably remedy the present stagnation that exists in these departments and substantially improve the faculty morale. Considering the small number of basic science departments, doubling the present salaries of a few members would not amount to a large figure, but would pay high dividends.

In the clinical area one could consider the following forms of full-time system

a) The absolute full-time which is desirable at least for the Chairman of the Department It means that the teacher has a fixed income regardless of whether he spends his time seeing patients, private or indigent, teaches or does research He would be allowed no practice outside the hospital

I SOME IMPORTANT PROBLEMS IN THE REGIONAL COUNTRIES THAT MAY BE SOLVED LOCALLY

The rapidly expanding population of this Region and the socio-economic developments of primarily agricultural communities changing towards industrialization impose certain difficulties in relation to medical care and education. A great number of medically indigent population, of whom a large percentage are children under twelve years of age, high infant mortality rate, inadequate means to establish public health measures and relatively little financial resources that could be placed in the area of medical care and education, are among the important problems.

Much thought should be given to the following questions in order to train the properly qualified medical manpower.

1. The Faculty Organization and their Salary Scales
2. Organization of the Teaching Hospital
3. Outpatient Departments
4. Rural and Community Health Activities
5 Teaching of Preventive Medicine
6. Teaching of Paediatrics
7. Research
8. Prevention of Loss of Manpower to the Countries outside the Region

1. The Faculty Organization and their Salary Scales

No medical school can reach the goal of excellence unless there exists a corps of full-time faculty. To have this privilege is usually an expensive proposition even if the qualified teachers are available. In the basic medical sciences, at least the chairman

THE ROLE OF INDIVIDUAL COUNTRIES OF THE EASTERN MEDITERRANEAN REGION AND THE REGIONAL OFFICE IN THE SOLUTION OF CERTAIN IMPORTANT PROBLEMS IN MEDICAL EDUCATION

by

Dr Mohsen Ziai
Professor of Paediatrics,
Medical College, Pahlavi University,
Shiraz, Iran

The Teheran Conference on Medical Education held from 16 to 24 October 1962 brought out certain valuable principles and details related to the various phases of medical education in this Region One of the most rewarding discoveries was the amazingly uniform approach to most of the problems by the participating members Although the conditions of various countries differed from one another, it was clear that the correct and internationally accepted schemes are applicable to most places.

It is not the purpose of this paper to discuss the recommendations of the Teheran Conference What is ideal and practical must be differentiated, and there are many of the suggestions agreed upon by the group that cannot be implemented immediately There is need for patience and industry to achieve the high standards desired by all of the participants. However, as one looks at the present situation, there are several common problems that may possibly be correctable without much difficulty and delay The removal of certain obstacles on the other hand, would require active assistance by the Eastern Mediterranean Regional Office of the World Health Organization.

5. Finally, WHO in its traditional rôle works almost entirely through the governments of individual countries. The present meeting, arising out of direct contacts with educational institutions in the region, is an exception of considerable importance. An increasing regionalization is appearing in world-wide medical practice --- and therefore, education In this connexion, the medical educators of the region can themselves be of help to WHO. If at first an informal association of the deans of the schools in the Eastern Mediterranean Region could be formed to explore the questions raised the formal organization at a later date of an Association of Eastern Mediterranean Regional Medical Colleges could be assured. Communication and joint action between WHO and medical education in the region would be facilitated

which was fully successful WHO assistance is continuing in providing visiting professors, e.g. in 1962 a professor in Health Education reviewed with the staff the health education teaching programme as well as the wider rôle of the Institute in the health education field. Institutions in two other countries are providing postgraduate training in public health and allied fields. A DPH course has been given in Lahore by the Institute of Hygiene since 1955 Further consolidation and development are under discussion with a view to making available another postgraduate training institution for fellows from various countries in addition to the School of Public Health of the American University of Beirut

26. Postgraduate preparation of other categories of medical and paramedical personnel is expanding. Some medical faculties in Cairo, Alexandria, Lahore, Karachi, Multan, Beirut and Teheran have programmes arranged for specialists with postgraduate qualifications. Questions related to specialists' training, postgraduate qualifications, preparations of academic teachers, etc., will also be taken up in the Medical Education Conference in Teheran in October 1962.

27. Medical science teachers are being prepared in Karachi in the Basic Medical Science Institute which has been organized under the United States bilateral assistance to Pakistan. Post basic nursing education programmes so far exist only in Pakistan, but it is expected that in five years' time, at least two more countries will be ready to start projects of this kind

AUXILIARY TRAINING

28. It may be equally helpful to review the policy of this Office with regard to auxiliary training also in the light of the various categories of countries which have been specified above. Auxiliary

training is invariably carried out in most of the Region, however, assistance to projects is limited to a few countries. In 1957, assistance in this field was given to two countries, now to six. The problem of auxiliary personnel was discussed extensively during an Inter-Regional Conference in Khartoum in December 1961 in which all six WHO Regions participated. This conference may be considered as a milestone in the history of the Eastern Mediterranean Region, since it dealt with a problem that is of great importance not only throughout the Region, but is of global importance for the development of health services everywhere. It also brought into focus that this Region has at its disposal unique resources and experiences in this field, a fact which the host country, Sudan, was able to substantiate and demonstrate in a most impressive way.

29. In general terms, it is hoped that assistance in this field to indi idual training projects as a rule will decrease. This does not mean that this important field will receive less emphasis in regional activities - the contrary is true. However, the place of action and emphasis of work will be shifted from national training (where normally the "frontline worker" is being trained) to inter-country projects in order to provide advanced training to the teachers who train auxiliaries and, equally important, to the supervisors in the field. One project will soon start which should help to fill an important gap, that is the training of laboratory technician tutors Another project is under discussion, which in five years from now will certainly be in full operation, and that is the training of sanitarian tutors and supervisors.

30. There will obviously be types of auxiliaries whose training may still need help from this Office, e.g. dental auxiliaries. One project, the first of its kind, has started in Sudan. The lack of dental care is great in almost all countries of the Region. As with the medical profession the few dentists available are concentrated in the cities. This type of auxiliary is an example for future programmes which can be started and implemented if and when the basic personnel of the health team is being trained and put at the disposal of the health administrations The "basic team" in this context is understood to be composed of the following: the medical or health assistant, the sanitarian and the public health nurse-midwife. Most countries have these three categories now in training, others have only two.

31. It does not need much explanation that WHO's assistance in the field of auxiliary training is almost exclusively limited to the second and third categories of countries (see page 20) Countries in the third category still need extensive help and WHO personnel with operational responsibilities. This assistance is at present quite substantial. WHO personnel takes care of the training itself including responsibility for administrative and organizational aspects of the project. It is planned that during the years to come the following two steps will be taken in order gradually to hand responsibility over to the Governments and have WHO functioning in its constitutional rôle as advisory body.

32 The <u>first</u> step will be to attach young doctors returning from abroad to the services of their countries and to the training projects for health personnel, preferably after some experience in operational health services.

33. The second step will be to assist in up-grading qualified and experienced auxiliaries themselves through some training, either in inter-country courses or through training programmes specifically planned for individuals or small groups in national institutions within this Region.

34. It is expected that thus although the assistance in the field of auxiliary training will be intensified in the direction of teacher preparation, the projects in countries needing immediate assistance will decrease. The number of the country training projects of traditional health auxiliaries which amounted five years ago to two and now to six, will be in all probability in five years from now not more than two with shift in emphasis and form of assistance as outlined above. This would also, and in fact should, enable the countries to take fully into their own hands not only training of their frontline health workers, but in addition enable them to arrange in-service training and refresher courses as an integral part of their national training programmes

FELLOWSHIPS PROGRAMME*

35. The importance of the fellowships programme is fully realized by every Member State within the Region, and serious attempts have been made to improve planning for the future.

36. Most countries of the Region have achieved real, though in some cases modest, progress in the planning and implementation of their WHO fellowship programmes. Technical guidance has continued to be provided, on request, by the Regional Office to assist countries in

---

*See also Figures I-IV

planning their fellowship programmes at least a year ahead, with a view to securing long-term efficiency. Despite this, it must be admitted, that countries have not always followed the criteria in setting priorities Efforts will, therefore, have to be adjusted and intensified to achieve this goal.

37. The appointment at the Regional Office during the year of a Medical Officer for Education and Training who has been devoting the greater part of his time to the fellowship programme bears testimony to the immense interest in this endeavour. More frequent visits to the field have been made to establish personal contacts with WHO fellows in training. The purpose of such visits is manifold. On being interviewed, the fellows' problems are explored closely and attempts at their solution are made "on the spot". The various training programmes are discussed with both the fellows and training authorities in an endeavour to help fellows obtain maximum benefit from the courses of instruction, taking into account the type and nature of their work in the future In addition, a more adequate assessment and follow-up of the fellows' academic performance is made, and wherever possible, former fellows are interviewed and matters pertaining to their work and their ambitions are discussed.

38. The rôle of WHO Representative is gaining increasing importance in helping to interpret to Governments broad aspects of the WHO fellowship programmes, particularly with regard to the selection of suitable candidates. However, it should be emphasized that procedures and methods of selection could still be improved.

39. Facilities within the Region are being explored and used more and more for placement of WHO fellows, including undergraduate medical students and paramedical personnel. The Sudan offers an example of a country of the Region whose services are being increasingly sought for placement of WHO fellows, particularly at the "auxiliary" level, when a given type of training is not as yet available in the country of origin or when the auxiliary needs some "advanced" training in a specific field.

40. The total number of fellowships awarded from 1949 up to the end of 1961 reached 1,935. The number awarded last year was 306 compared with 221 in 1960. It is interesting to note that during the year 1961, there was a sharp increase in the number of fellowships awarded to undertake courses and study visits. Another interesting finding is the continued increase in the number of intra-regional fellowships during the year which exceed those awarded by the Eastern Mediterranean Regional Office for study in any other Region. This trend has been particularly noticeable since 1959, when the number of intra-regional fellowships was 103, in contrast with 107 and 140 in 1960 and 1961, respectively

41. A noteworthy development has been the increase in the number of women from various countries of the Region undertaking studies in medicine and pharmacy, under WHO sponsorship. During the year under review, six WHO fellows (women) from three countries were taking up undergraduate medicine and pharmacy in medical schools in this Region. If nothing else, this reflects the growing interest of several countries in making available more opportunities for women to obtain training in these subjects. The trend will continue

to have the full support of the Regional Office, taking into consideration the urgent need of some countries for professional female medical and health personnel to conduct specific programmes in their communities, including maternal and child health, gynaecology and obstetrics, etc It is expected that with increasing numbers of girls completing their secondary education in the Region, more of them will be considered for WHO fellowships in the future.

42. In the next five years or so, the general trend of the fellowship programme is expected to be directed towards.

(a) Promoting adequate planning by respective countries in the light of health needs and priorities vis-a-vis the overall national health programmes.

(b) Fostering and strengthening public health training at a postgraduate level within institutions of the Region. Use is already being made of the High Institute of Public Health, a WHO-assisted project in Alexandria, and the School of Public Health, American University of Beirut, for training WHO fellows at post-graduate level.

(c) Sponsoring fellowships for basic professional nurses to study at the Higher Institute of Nursing, Alexandria, the American University, Beirut, and the Nursing College, Khartoum, all of which receive assistance from WHO, and any other suitable institution for fellows from Regional countries who do not yet have training facilities for professional education in nursing

(d) The provision of internship studies for medical undergraduates with a view to making more adequate facilities for them to spend the period of internship in their countries of origin or in neighbouring countries with similar circumstances.

43. To sum up, efforts will be made to focus the fellowships programme on "centres of gravity" in the overall national health programmes which manifest priority need for more trained health personnel.

44. Looking further ahead, it is possible, indeed probable that there will be a greater increase in the number of WHO fellowship awards next year, which will form a genuine investment for future programmes This progress is expected to come about from slow, solid work, together with continued mutual co-operation and understanding between the Member States and the Regional Office. In this connection tribute should be paid to the countries for their valued assistance throughout the year which has contributed substantially to the promotion of the overall programme. The ground is richly fertile for even further progress

ii. Suggestions for Possible Action made during the Conference on Medical Education held in Teheran in October 1962

The following are extracts from conference reports and other sources. They concern possible action by the Organization

Committee "C" "It was suggested that WHO be asked to approach publishing firms with the view of producing cheap editions of standard text books".

Re libraries, "the recommendations of the WHO consultant on the libraries of the medical schools of the Region should be put into practice".

Re audio-visual aids, "the Committee strongly recommends that WHO and other similar agencies should give material assistance in dealing with this deficiency. It would be an advantage to have at least one senior member of each medical faculty especially trained in the use of such aids".

Committee "E" Continued education of the teacher, senior as well as junior is essential. "It is felt essential that each staff member should go abroad at least once every 3-5 years For these visits the national government or international agencies like WHO should bear the cost as the teachers cannot afford the high expenditure involved".

"A plea is made for greater use of the facilities in the Region and it is suggested that WHO should periodically prepare and circulate particulars of the institutions of high merit and details of the research work effected in various schools of the Region".

Committee "F" "The Committee also suggests that WHO should if possible convene an expert committee to study and make recommendations for acceptable standards in hospitals and community health centres utilized for the internship and residence training in the Region"

These standards should relate to such items as. size of the hospital, its equipment, out-patient, medical and nursing staff laboratory facilities, system of medical records, library and other facilities for scientific and educational activities in general".

Committee "G" "A view was put forward that a regional post-graduate institute should be set up with the initiative and active assistance of WHO"

Committee "H" The creation of professional bodies to advise on matters leading to the promotion of medical education. "It is recommended that WHO should give all possible support to the development of

this kind of activity, study the possibility of a regional professional "body" (Also in President's speech at Closing Session).

Second Plenary Session

"The suggestion was made that within the Region an international medical college under the aegis of WHO and other international agencies might be established".

Closing Session

"After a reasonable time a second Conference should be held".

ANNEX II

LIST OF MATERIAL DISTRIBUTED BY PARTICIPANTS
DURING THE MEETING

1. Arabic Report of the "UAR Medical Education Conferences, Alexandria & Cairo", 1963.

2. Report of the University of Teheran "Text of Legal Bill for Employment of University Teaching Staff", 1963.

3. Paper of the University of Teheran, Institute of Parasitology and Malariology on "Geographical Pathology of Iran", 1960.

4. Paper of the University of Teheran, Institute of Parasitology, Tropical Medicine and Hygiene - "A Brief Report on the Organization, Programmes and Activities of the Institute", 1963.

5. Brochure on "Postgraduate Medical Education at the Liaquat Medical College, Hyderabad", 1963.

6. Report on "Postgraduate Medical Education", 1963, by Professor Najib Khan

7. Paper on "Modern Trends in Clinical Teaching in England", 1963, by Professor Najib Khan.

ANNEX III

AGENDA OF THE MEETING

1. Introduction by the Regional Director
2. Election of Chairman, Vice-Chairman and Rapporteur
3. Adoption of the Agenda
4. Statements by participants and observers on developments since the Teheran Conference
5. Consideration of important features and difficulties observed in the course of medical education programmes within the Region
6. Discussion of inter-country and international co-operation in the promotion of medical education programmes and formulation of proposals for the rôle of WHO in this field
7. Approval of the Provisional Report of the Group Meeting
8. Closing Session

ANNEX IV

LIST OF PARTICIPANTS AND OBSERVERS

PARTICIPANTS

IRAN	Dr. C.M.H. Mofidi Director Institute of Parasitology, Tropical Medicine and Hygiene Teheran
	Dr. A. Naficy Dean, Medical Faculty Isfahan
IRAQ	✗ Dr. A. El Badri Dean, Medical College Baghdad
LEBANON	Dr. Samuel B. Kirkwood Dean, Faculties of Medical Sciences American University of Beirut Beirut
PAKISTAN	Dr. Najib Khan Chairman, Academic Council Professor and Head of Department of Medicine Liaquat Medical College Hyderabad WEST PAKISTAN
	Dr. M.A. Shah Chairman, Academic Council Professor and Head of the Eye Department Dow Medical College Karachi

✗ did not participate

SUDAN	Dr. Dawood Mustafa Head of Department Faculty of Medicine University of Khartoum Khartoum
SYRIAN ARAB REPUBLIC	Dr Kanaan El Jabi Professor of Histology Damascus University Damascus
UNITED ARAB REPUBLIC	Dr. Abdel-Rahman El Sadr Dean, Faculty of Medicine and Professor of Urology Alexandria University Alexandria
	Dr. Abdel Wahab El Borolossy Dean, Faculty of Medicine University of Assiut Assiut
	Dr. A. Lotfy Aboul-Nasr Professor of Cancer Surgery and Head of Cancer Institute Faculty of Medicine Cairo University Cairo
OBSERVERS	Dr. Henry van Zile Hyde Director Association of American Medical Colleges Evanston - Illinois USA
	Dr. Harold Margulies Chief of Party, Indiana University Postgraduate Medical Centre Jinnah Central Hospital Compound Karachi PAKISTAN

WHO CONSULTANTS

Dr. M.K. Afridi
Honorary Consultant
Ministry of Health, Labour and
Social Welfare
Karachi
PAKISTAN

Dr. M. Ziai
Professor of Paediatrics
Medical College
Pahlavi University
Shiraz
IRAN

WHO SECRETARIAT

Dr. A.H. Taba	Director	Regional Office for the Eastern Mediterranean
Dr. A.A. El Halawani	Deputy Director	Regional Office for the Eastern Mediterranean
Dr. E. Grzegorzewski	Director	Division of Education and Training, WHO Headquarters
Dr. A.C. Eberwein	Public Health Administrator (Education and Training)	Regional Office for the Eastern Mediterranean
Miss C. Cartoudis	Conference Officer	Regional Office for the Eastern Mediterranean