

# **The Planning of Medical Education Programmes**

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Report of a  
WHO Expert Committee

Technical Report Series

547



World Health Organization, Geneva 1974

*This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of the World Health Organization.*

**WORLD HEALTH ORGANIZATION  
TECHNICAL REPORT SERIES**

**No. 547**

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MEDICAL EDUCATION  
PROGRAMMES**

**Report of a  
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**WORLD HEALTH ORGANIZATION**

**GENEVA**

**1974**

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# WHO EXPERT COMMITTEE ON THE PLANNING OF MEDICAL EDUCATION PROGRAMMES

Geneva, 10-14 September 1973

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# THE PLANNING OF MEDICAL EDUCATION PROGRAMMES

## Report of a WHO Expert Committee

### INTRODUCTION

A WHO Expert Committee on The Planning of Medical Education Programmes met in Geneva from 10 to 14 September 1973. Dr W. H. Chang, Assistant Director-General, opened the meeting on behalf of the Director-General. After welcoming the members of the Committee, he pointed out that WHO had already convened a number of expert groups to discuss the various aspects of medical education, including a Study Group on Internationally Acceptable Minimum Standards of Medical Education which met in 1961.<sup>1</sup> In addition, it is proposed to hold a meeting in 1974 to discuss the planning of schools of medicine. It was expected that the general guidelines formulated by the meeting would be useful both to those responsible for setting up new medical schools (often in geographic areas lacking adequate health services) and to those responsible for established medical schools, particularly when changes in the educational programme were being contemplated.

In formulating guidelines for medical education the Committee was asked to consider the following items :

1. Identification of factors that should influence medical education policy ;
2. Definition of the role of the medical school graduate ;
3. Formulation of medical school policy on the basis of (a) national health policy ; (b) economic determinants ; (c) academic determinants ; and (d) community involvement.

A questionnaire designed to gather information on these items had been sent to Committee members before the meeting and their replies served as a starting point for the discussions.

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<sup>1</sup> *Wld Hlth Org. techn. Rep. Ser.*, 1962, No. 239.

# 1. IDENTIFICATION OF FACTORS THAT SHOULD INFLUENCE MEDICAL EDUCATION POLICY

## 1.1 Health profiles<sup>1</sup> and possible worldwide standards

In order to limit the scope of the discussions on this very broad topic, it was agreed that, while medical education was in many respects inseparable from education for other health care professions, this report should be concerned almost exclusively with medical education, i. e., with the preparation of the physician. While there are many references to other members of the "health-care team" they were considered only in relation to the training and/or education of the physician.

In a strict sense, standards of medical education might be expected to relate to levels of performance or expertise. The Committee agreed, however, that the formulation of international standards of this kind—or even of guidelines for their development—would be inappropriate. On the other hand, it is quite feasible to establish broad objectives for medical education and to make generalizations about educational policies for the guidance of planning groups. The Committee's discussions were therefore directed to the development of standards of this type.

It is evident that medical education must be relevant to the needs of the society in which it exists. Health needs are changing rapidly in many societies and medical education policy must be responsive to changing needs.

In any nation or society there is essentially "an epidemiological basis" for medical education. Mortality, morbidity, other health patterns and profiles, and epidemiology in general are all now much more amenable to measurement. Thus, data concerning health patterns and delivery of health care can be confidently utilized in the definition of broad goals of medical education and in the design of the educational programme itself. On the basis of such broad goals, schools and departments can (and should) define their student-oriented learning objectives. Accurate definition of educational objectives<sup>2</sup> is important to the success of any educational programme, but it would be beyond the scope of this report to enter into details of this process.

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<sup>1</sup> For the purpose of these discussions, the health profile of a country was defined as all the elements that indicate the health status of a population as well as the various means used for the delivery and evaluation of health care.

<sup>2</sup> For the purpose of these discussions, educational objectives are explicit statements of what the student is expected to be able to do as a consequence of a period of learning; they should include criteria to permit an evaluation of the student's knowledge, attitudes, and skills.

In setting goals of medical education the suggestion is often made that learning experiences should be directed more toward preparing students to solve health problems. This suggestion is sometimes criticized on the grounds that those desiring the change are interested only in preparing a "technician", i.e., one who will no longer have a grounding in the sciences or be interested in a life of scholarship and study. The critics often argue that there are essentially two types of school: one that is devoted to teaching only skills and techniques and virtually no science, and the other in which the emphasis is on science and techniques are practically ignored, on the assumption that they can be learned later in postgraduate training. In reality, medicine is a profession that requires a balanced education; in other words, a medical school is a professional school in which students should learn both the sciences and a set of professional skills through which to apply those sciences to the solution of health problems.

The existing structure of health services is another source of data for rational educational planning. Both the structure and the function of health services must be considered and the student should be expected to study these carefully and be prepared both to participate in that "system" of delivery of health care (in his proper role) and to study and modify the system as needed. Ultimately, as a physician, he will be expected to supervise and evaluate the delivery of health care as well as be a direct provider of care. Thus, a medical education policy should be such that it also promotes the search for improvement of health care delivery.

## **1.2 Health authorities and academic freedom**

It was clear to the Committee that the power structure within the health services would differ from one situation to another and that the relationships between governments and other responsible agencies on the one hand and those responsible for health care and/or medical education on the other would also vary widely. Generalizations regarding these relationships would be of such a broad nature as to be of little use. However, whatever the power relationships the government (and/or other responsible agencies) will require certain information on which to base national policy.

Since, as already observed, medical education must be closely geared to the health problems of the society it seeks to serve, the medical school must have the staff and resources to conduct adequate research in epidemiology, economics, and existing health care practices in order to provide the government with the information needed to define a policy for medical education. Such research should be free of political pressures. Academic freedom is essential if the data thus generated are to be of maximum use to the government. This freedom, on the other hand, carries with it the

duty for academic faculties to engage in evaluation of health care and its potential benefits. As long as the research is related to community needs, the government may be expected to provide support and guarantee academic freedom.

Planning should reflect the needs of both the government and the educators. To the medical educators it often seems that there is an apparent lack of appreciation of the problems besetting a medical faculty when a government "demand" for more physicians is made. Conversely, and of equal importance, it often appears to the government that medical faculties are preoccupied with "academic excellence" and "standards" while seemingly ignoring unmet needs in the delivery of health care in the very society served by the school. It is obvious that a large measure of mutual confidence is essential. Dialogue between government and education authorities must begin at once and be maintained even after the establishment of good communication and understanding.

### **1.3 Medical education policy and changing needs in health care**

Population growth, changes in the age structure of the population and in morbidity/mortality patterns, a progressive increase in the complexity of medical technology, modifications in the system of delivery of health care, are among the variables that are constantly influencing health manpower needs in any country. Those responsible for medical education should be constantly aware of changes in these factors and of how they affect health manpower needs. Unfortunately, the methodology for projecting health manpower needs is still rather poorly developed, particularly with reference to determining needs for specialists in the various fields of medicine.

A better approach seems to be that of starting with a description of the health services to be provided. Then in the light of known needs and available resources, one can define the composition of the health team required to provide those services. It is possible—in a given situation—that the need for more physicians may decrease with an increased delegation of selected functions to other types of health personnel, who might be of particular benefit in providing primary ("first contact") care in remote or poorly serviced areas. They might also assist busy physicians in urban areas, keeping constantly in touch with them by telephone. Careful experimentation and innovation in systems of delivery of health care, if evaluated and found successful, might produce changes in the needs for physicians. In that event, the continued production of certain types of specialists at current rates could lead to imbalance. For this reason, constant scrutiny of existing projections is necessary.

A careful observation of the health manpower situation in many countries reveals large variations in the composition of the health team and in its distribution throughout the country. The methods available for health manpower planning still leave much to be desired, but in spite of these limitations, some countries with centrally planned economies, and in which the apparatus for manpower production is under the same direction as is the health system, have succeeded in achieving a good distribution of the physician manpower among specialties. In the majority of the countries, however, the problem of maldistribution of physicians, geographically and among specialties, is a serious one.

Geographical maldistribution is a problem that is more easily identified than corrected. For example, medical care for sparsely settled rural areas of developing countries is almost non-existent. Even in more densely populated areas, physician services may be unavailable. This aspect of maldistribution occurs for many reasons, among which are unattractive living conditions for potentially available physicians, lack of resources in the public sector to provide an adequate remuneration for the services of potentially available physicians, or distance (social as well as geographic) from facilities for secondary and tertiary care.<sup>1</sup>

Maldistribution of physicians practising in various specialized fields and providing primary care<sup>1</sup> is a common problem. The more glamorous, lucrative or prestigious specialties attract an excessive number of candidates, whereas areas of great social interest, such as geriatrics, preventive medicine, adolescent services, mental health, and family practice, have not been attracting enough candidates.

Although some of the causes of this kind of maldistribution can be solved only by actions and changes that transcend the health system, there are others that are internal to it and for which corrective mechanisms could be established as part of a comprehensive medical education policy.

(a) *Selection, counselling, and career guidance.* This applies both to candidates about to enter medical schools and to students choosing a career path during their medical course. Candidates not admitted to medical schools or students who fail at some point in their medical training may be oriented

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<sup>1</sup> For the purpose of these discussions, the terms primary, secondary and tertiary medical care were understood to have the following meanings: *primary medical care*: front-line medical care; as a rule not limited to patients with specific diseases within specific age-groups (this is the field of practice where the patient usually makes his first contact with the physician, and has direct access to him: *Wld Hlth Org. techn. Rep. Ser.*, 1964, No. 267, p. 4); *secondary medical care*: care requiring attention of a special nature, usually more sophisticated and complicated than could be handled by the general practitioner; *tertiary medical care*: care requiring highly specialized attention, and which can usually only be provided in centres specially designed for this purpose and by physicians trained in the area of specialization.

to other health careers. Successful students in their later years in medical school may be assisted in their career choice with sound information about community needs and career opportunities in the various fields of medicine.

(b) *Modification of faculty attitudes and behaviour.* One commonly identified problem is the lack of medical faculty interest in general (family) practice.<sup>1</sup> In some places more than 90% of medical students indicate that they want to become specialists. This may be due partly to the systems of rewards offered later in practice, but also partly to unfavourable faculty attitudes towards general or family practice. If this mode of practice is to be encouraged, physicians in general or family practice should be represented on the faculty in positions of the same importance as other specialists, thus providing a model for students to emulate.

(c) *Provision of economic incentives.* Rewards must be sought for those entering career paths of greater interest to society (e.g., practising for a period of time in a rural area or another area in which health care is inadequate). Such rewards may be of a direct economic nature; they may, however, be in the form of credits for career advancement or of opportunities for postgraduate studies. The goal, of course, is to encourage students to study (and practise) in areas of greater social need and at the same time to discourage the tendency towards overspecialization.

(d) *Discouraging students from entering overcrowded specialties.* Conversely, added difficulties may be placed in the way of entrance into postgraduate training in specialties already overcrowded. Furthermore, creating stimulating learning experiences in those fields where social needs are greatest can help to influence career choices in favour of these specialties. Just as studies in these fields should be accorded the same status as those of the traditionally more important specialties, they should also be adequately represented among the examination questions for promotion, certification, and/or licensing.

(e) *Motivation by relevant learning experiences.* Rural health work and preventive and community medicine may be perceived as dull experiences if they are forced upon the student as compulsory activities outside the context in which he is pursuing his career interests. However, if these activities are made an integral part of the actual clinical learning, the situation may be changed. Community medicine should become a total

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<sup>1</sup> The family physician offers to all the members of a family he is serving a direct and continuing access to his services. Family physicians are usually general practitioners but may also be internists (*Wld Hlth Org. techn. Rep. Ser.*, 1963, No. 257, p. 6). The general practitioner is a physician who does not limit his practice to certain disease entities and who offers his patients direct and continuing access to his services (*Wld Hlth Org. techn. Rep. Ser.*, 1963, No. 257, p. 6).



faculty commitment in which other clinical departments besides the department of preventive or social medicine should participate.

Students learn through what they experience. This important concept should be kept in mind by creating stimulating real-life learning experiences in fields of social interest, fields for which recruitment is desirable.

#### **1.4 Economic, sociocultural, and educational factors**

Medical education should be responsive to economic, sociocultural, and educational factors and constraints. These forces represent the parameters that delimit the freedom of the medical education policy maker.

Economic factors determine the resources that are available for capital investment, operational costs, and the absorption of graduates into the professional services, whether in the public or private sector. Sociocultural factors manifest themselves in the demands that society makes for more services of a given type and for more professionals of one kind or another. The educational problems of medical schools are fundamentally the same as those at present confronting other university faculties.

A responsive medical education policy cannot ignore these factors. Medical schools cannot be simply interested bystanders or reactive institutions, responding to pressures; they have to help to shape events in the health care arena and they must be committed to the enlightenment of public opinion if demands of society are unsound. They must interact with the health system as it is, and assist in its gradual and continuous improvement.

In medical education this has meant a much greater involvement of medical schools with the outside world. It has meant a closer relationship with the schools of other health professions, the development of health science centres and faculties of health sciences (or their equivalent). It has meant the beginning of discussions about the desirability and potential of a new, fully mission-oriented "University of Health Sciences". A carefully planned trial may prove such an initiative to be well worth while.

This interaction between the community and the medical school has led to the establishment of cooperative arrangements among departments and among professional schools, cutting across disciplinary lines. Biomedical engineering, cybernetics and computer science, nutrition and agriculture, molecular biology, represent fields where the principles of interdisciplinary research have to be applied.

Finally, there has been an increase in the transactions between medical schools and the institutions that form the health system. In some countries formal agreements have been signed (involving ministries of health, social



security institutes and the university) to undertake coordinated activities within a state or province of the country. The setting in which medical education takes place outside the confines of the teaching hospital provides unusual opportunities for teaching, service, and research. Moreover, the health services gain from this relationship an addition of talent and skills that should facilitate a quick evolution to a much more closely coordinated health delivery system. In other countries, the movement has spread to various university centres and one finds students and teachers of medicine, dentistry, nursing, veterinary science, and engineering working side by side at the community level.

The success of these ventures in improving education and, at the same time, the service institutions depends upon the functional interdependence of all interested contributing parties, each one keeping his own individuality. National planning commissions have an important role to play, serving as nodal points for coordination of effort. But once the action phase is started, faculty members, students, and health workers of various types can and should work side by side without any impingement on each other's domain and prerogatives.

### **1.5 The influence of socioeconomic development on medical education policy**

As was stated earlier, medical school administrators and planners must be responsive to the needs of society. It is therefore necessary to examine how socioeconomic factors influence medical school policy, or in other words, how society can change the medical school. It is apparent that socioeconomic development both *determines* and *limits* medical education.

As regards societies at a relatively low level of socioeconomic development, the Committee gave particular attention to the priority to be accorded to medical education, especially as compared to other projects. It now seems generally recognized that improved health conditions must be part of the general development and that, at the same time, improved socioeconomic development will contribute to better health conditions.

The economic problems of medical education demand that it make use of less costly techniques whenever feasible. It is now recognized that in many instances, as far as health care for the population is concerned, countries might be better served by health personnel other than the physician; for primary care, the use of physicians might become a luxury and possibly even considered a less effective way of delivering it.

While it was assumed that sooner or later every country, perhaps with the exception of very small ones, should have a medical school, for the time being it might still be necessary to train physicians in regional institutions.