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THE TEACHING OF HYGIENE AND PUBLIC HEALTH IN EUROPE

A Review of Trends in Undergraduate and Post-Graduate Education in Nineteen Countries

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Foreword

This monograph contains a survey of undergraduate and post-graduate training in hygiene and social and preventive medicine and is an attempt to present a balanced picture of the present-day scene in this regard for part of Europe. The wide variety of teaching in these subjects would, at this stage, make a world-wide survey far too ambitious and difficult a task. Therefore, it has been considered desirable to begin with a limited area—19 countries of Europe—though with full awareness of the fact that this is only a beginning and that it will be necessary eventually to cover in a similar manner other regions, such as certain countries of eastern Europe, where very different patterns have developed, and the USA and other American countries, where the situation is, again, quite different in many respects from that described in this monograph.

In the preparation of this publication, the authors have drawn freely upon the information furnished by two conferences organized by the WHO Regional Office for Europe: a conference on undergraduate training in hygiene and preventive and social medicine, held in Nancy, France, in December 1952, and another conference, on post-graduate training in the same subjects, held at Göteborg, Sweden, in July 1953. In addition, they have used information obtained from interviews with educators in certain European countries which they visited, under the auspices of WHO. This monograph is, therefore, not intended to be an expression of the opinions of the authors, but rather a synthesis of views of leading educators at the two conferences and of those with whom the authors discussed their subject during visits to specific countries. Nevertheless, the work quite naturally bears also the authors' imprint while giving voice to the views of others. It is hoped that it presents an accurate description of the relevant common trends in medical education in the countries covered.

Some changes may have been made in some of the schools discussed in the monograph since the time of the conferences and the preparation of the final text. However, except with regard to detail, such changes are probably neither numerous nor significant.

After a general introductory section dealing with historical aspects of the subject, the authors turn to separate examinations of undergraduate and post-graduate teaching of hygiene and social and preventive medicine. These two sections have been written so that they can be read independently of each

other; consequently, a certain amount of overlapping has been considered acceptable. There follow descriptions of the teaching of public health in 19 countries. The information contained in this part of the monograph was obtained from various sources, but the final text was sent to the respective countries for comments and approval. Brief reports on the Nancy and Göteborg conferences are included in annexes.

In an effort to make this monograph as authoritative and as internationally significant as possible, the manuscript was submitted to leading public-health educators in eight countries representative of different patterns of medical education. Their co-operation is hereby gratefully acknowledged.

It is hoped that this monograph, through its analysis of the present situation in a limited area, will make a substantial contribution to the development of teaching in hygiene and preventive and social medicine in other parts of the world.

Introduction

Medical training institutions, like all others, must improve and adapt themselves to the continual advances in both medicine and social welfare, advances which have been particularly remarkable during the last half-century.

National economy is based on human economy: there is a close and reciprocal relationship between work, production, the strength of a country, and the " capital " which is constituted by the health of its people. In the vast and noble task of protecting and increasing this " health capital " —a task which it is hoped to undertake on a universal scale—a primary role is obviously assigned to the medical profession; and the higher the technical, social, and moral standards of the members of that profession, the more effective will their contribution be. Where are these standards very largely inculcated if not in the training of the physician, in the education which he receives?

It is not surprising, in these tumultuous days, which are nevertheless enriched by increased knowledge and transformed by social evolution, that in most countries the whole or part of medical education is under reconsideration, and that all the so-called " under-developed " countries which want to institute training along modern lines are awaiting the opening of discussions on national and international levels with regard to directives and programmes which provide the desired re-orientation.

History shows that the teaching of medicine has often had to be re-adapted to scientific progress and to social changes, that the reform of medical studies, particularly since the First World War, has given rise to many controversies and been the subject of many publications. In this effort great value must be attached to the contribution of the institutions which work on a basis of international co-operation and which, for the past 30 years, have placed in the forefront of their activities the development of the education and training of those engaged in health activities. These institutions, through the activities they have promoted and the support they have provided, have contributed very considerably to the development of medico-social techniques throughout the world. Looking back, however, we are obliged to admit that, in spite of the passing of the years and the changes which have taken place, we find ourselves today still faced with identical problems in regard to this question of training.

From the outset it was recognized that progress in the field of health was dependent to a large extent on the level of the studies for the preparation of both specialized hygienists and medical practitioners, and it was the realization of this fact that led the Health Organisation of the League of Nations to create in 1924 a standing commission on the teaching of hygiene and preventive medicine. The functions of this body were later taken over by a series of meetings of directors of institutes and schools of hygiene, which did a considerable amount of work up to 1939. It was during this period that schools of hygiene and national institutes of hygiene or public health began to be created in various parts of the world. These schools and institutes were called upon to play primary roles in the training of physicians and public health personnel and in health education of the public, to carry out research, and to intervene actively in public health problems. A special tribute should be paid here to the Rockefeller Foundation, which played such an important part in the creation of these institutes and in the establishment of a system of fellowships and exchanges for the benefit not only of students, but also of already specialized technicians and teachers.

From 1931 on, a constructive effort was made to direct medical education along new lines, and the most eminent professors of universities in many countries participated in this effort. Up to 1938 many reports were published in the form of syntheses for the purpose of providing universities with directives which might enable them to make progress along the right lines. Many of those directives are, in fact, still valid today. During this period, too, there was fruitful collaboration with the International Labour Office, particularly in regard to the social action which is necessary as a complement to preventive and curative action (with special reference to social insurance) and, consequently, in regard to the training which the physician should receive to enable him to accomplish his mission.

The maelstrom of 1939-1945 not only swept aside but completely dislocated and even demolished the already considerable achievements and the reforms which were being undertaken. In addition, urgent necessities, important social changes, and the introduction of new concepts and therapies created heavier obligations and responsibilities in connexion with the safeguarding of populations.

The Health Organisation of the League of Nations did useful work; and the World Health Organization, in application of one of the Articles of its Constitution, which requires it to " promote improved standards of teaching and training in the health, medical and related professions ", is implementing a vast programme in the field of medical education and professional training.

WHO, in its immense effort for the improvement of professional training, is following the principle of advising and adopting only those measures and means which have been thoroughly studied, and of insisting

that such measures and means must be suitably adapted to local conditions and requirements. There is, very wisely, a directive to the effect that although certain minimum standards are applicable to all countries, and in particular to those in which students successfully completing their studies receive a diploma, there is no justification, when new programmes are to be established, for making such programmes mere copies of those operating elsewhere. Each teaching establishment must reflect the living conditions of the community for which it has been created; successful training often depends as much upon teaching methods as upon the content of the curriculum. Too much emphasis cannot be laid upon the importance of such principles in general, and they become even more important in connexion with technical training in health and social protection. During the last few years, therefore, these problems of training have been considered not only on the general world level, but specifically from the point of view of the various geographical regions which have been established by WHO in accordance with the judicious policy of decentralization—combined with co-ordination—which governs all its activities.

There is no doubt that the general attitude towards the development of these constructive activities is becoming more and more favourable; governments and public health authorities cannot fail to be interested, and the schools of medicine are themselves adhering to the point of view that medical training should be reorganized and better adapted to the role and responsibilities of the physician in modern society. The great social institutions, and in particular the social security institutions, believe, and rightly, that development of the medico-social training of the physician is essential to the efficacy of their own activities and to their economy. It was for this reason that the International Social Security Association placed this question on the agenda of its 1955 General Assembly. Finally, national medical associations and the World Medical Association (WMA) are taking an increasing interest in the question of training, of reform of medical studies, of qualification in general and of qualification in preventive and social medicine in particular. The scope and importance of the debates at the First World Conference on Medical Education, held in 1953 * in London, with the participation of WHO, amply proved WMA's interest in the efforts that are being made, and its desire to co-operate.

Time will be needed, of course, and funds must be forthcoming before the necessary institutions can be set up and adequately equipped everywhere (particularly in the " under-developed " countries), and before not only installations but habits, solidly-rooted tendencies in university programmes, can be transformed. The efforts which are being made must

* *Proceedings of the First World Conference on Medical Education, London 1953*, London, 1954

therefore be supported and intensified; the good results already obtained and the directives which emerge from them must be made known.

Over the years, the reports of WHO expert committees concerned not only with medical education and professional training, but also with other subjects closely allied to health and social welfare—e.g., maternal and child health, school health, mental health, and tuberculosis control—have provided very valuable information.

Today this information is amplified by the publication of an important report which widens our outlook upon, and defines our opinions concerning, a question which is of paramount importance, both from the point of view of the training of the physician and from that of the protection of public health. This report, based on the ideas and conclusions which emerged from conferences held at Nancy and Göteborg under the auspices of the WHO Regional Office for Europe, and distinguished by the eminence of the experts who participated in their debates, gives a general exposition and a statement of the present position with regard to the teaching of hygiene and preventive and social medicine. Two of our colleagues, Professors J. Mackintosh and F. Grundy, were responsible for the compilation of the report, and their high technical qualifications and long experience in this field are a guarantee of the quality and practical value of the work.

In this monograph, the authors deal successively and logically with the place of the above-mentioned subjects in the medical curriculum. First of all, they comment upon the general undergraduate training of the physician, and then pass on to post-graduate instruction and specialization in public health. There follow some observations on, and comparisons between, syllabuses in the various countries, and an over-all assessment of the situation in Europe. The report is extremely well documented, full of concrete examples and of interesting details on teaching methods and procedures; it throws light on the points still under discussion and opens new perspectives not only on training but also on public health practice. It also has the merit of making no attempt to lay down general and final principles for solutions or directives, whose essential value must lie in the flexibility with which they are applied.

* * *

Medicine today covers so vast a field, its specialized branches are so varied that, in order to learn or teach it, it must be split up into numerous disciplines. The number of Chairs is, in fact, continually increasing. It is impossible to overemphasize the necessity for combating any tendency to isolation—any tendency for each branch to cut itself off from the rest in an attempt to become self-sufficient. In medical practice, observation and examination, diagnosis and treatment are always based on synthesis,

and scientific research calls for team-work. Indivisibility in medicine implies indivisibility in training.

It must therefore be made clear, first of all, that in presenting a study devoted essentially to the teaching of hygiene and preventive and social medicine, these subjects are treated separately—a purely artificial separation —merely in order to facilitate treatment of the subject. The expert committees which previously studied these matters naturally discussed them within the framework of the general programme of medical studies, and, similarly, the authors of this monograph have, in their first chapter, established the place of social medicine in the general education of medical students and have subsequently made it clear that there must be co-ordination and collaboration in order that the programmes of all departments of faculties of medicine may be brought into harmony.

There has been gradual realization of the fact (a fact which the events that have shaken the world during the past forty years have helped to make clear) that the protection of health exclusively from the hygiene and sanitary points of view, without reference to living and working conditions or social and economic factors, cannot be fully effective, and that, on the other hand, legislation which facilitates extensive social action will have only a limited effect unless parallel and adequate measures for the improvement of both physical and mental health are also introduced.

Social medicine therefore constitutes a necessary stage in the evolution of medical science: social diagnosis clarifies and completes medical diagnosis; social treatment supplements medical treatment; social hygiene fortifies individual and collective hygiene. Social medicine, which combines action in the health and social fields, aims at the protection and development of the human personality considered as both a spiritual and an economic value.

Protection of this kind, however it is organized, calls not only for the intervention of health officers responsible for the " administration of public health " and of medical specialists in the various fields of social medicine, but also for the co-operation of the medical practitioner in his work with the family and in the community. Although the means and procedures at the disposal of the medical practitioner have been enormously improved and increased, he also bears new obligations and responsibilities which have sprung from the development of preventive medicine and from social evolution. In order to be able to meet these new obligations and responsibilities, he must understand why he should collaborate, and how to collaborate, in collective health and social activities; his training, particularly his training in the medical faculty, must prepare him for such collaboration.

The aim is not by any means the unification of training in all countries. It is logical, in the face of so many factors which demand it—not only educational but also health, social, and economic factors—that programmes be adapted to national conditions.

Seeing that the value and efficacy of protection of public health is largely dependent on the level of medical training, and in particular of training in hygiene and social medicine, it is obvious that public health needs must be taken into account in the preparation and continual adjustment and improvement of curricula and of teaching methods. In fact, medical training must be appropriate and adapted to the health and social policy of a country; and to achieve this it is desirable, and even essential, that there be co-operation between those who work in the two mutually complementary fields of influence—those of education and of health and social welfare—between ministries and interested institutions, not forgetting the necessity for co-operation by the national medical associations or, on the world level, by the World Medical Association. Contrary to the still too widely held opinion that the training of physicians is exclusively a pedagogic question, it may be said that it is a matter which concerns also the public health authorities, and that the very future of the profession is involved.

The authors of the monograph mention that many participants in the conferences have insisted—and we are entirely in agreement with them—on the value of inculcating in students, from their first year, a wide and adequate conception of the role of the physician in modern society.

It is certainly desirable that, from the outset, young students be given a general, over-all picture of medicine as it is today, of its development, of the knowledge acquired in the preventive and curative fields, of progress at national and international levels in connexion with the various diseases—progress which has given as a concrete result the prolongation of human life. Should an effort not be made at the same time to introduce to them, to see that their minds grasp, the great principles which are embodied in the Constitution of WHO, particularly those concerning the right of every human being to the highest possible level of health? If physicians are to be inspired by them must they not, as students, be instructed in these principles, which are not purely a philosophical conception but a human approach to the teaching of medicine?

Would it not also be advisable to use for educational and demonstration purposes the preventive-medicine centres for the protection of the health of its students which should be attached to every university? If explanations are given to the student of the reasons for the medical examinations, tests, and vaccinations (especially BCG) which he himself is required to undergo, he will understand some of the measures for the protection of health; and, above all, his mind will be opened to the practical value of preventive medicine. At the same time, he can be shown how to approach his studies and career in a rational manner.

Most important of all, there must be a reform of the old ideas which still hold sway in the universities where hygiene or public health is too often considered as " outside medicine ". In his studies, the student seeks

especially the instruction which he believes will be the most useful to him in his future practice, and for this reason he tends to neglect the study of hygiene because to him its value is not as tangible as that of clinical medicine, therapeutics, etc. We must prove to him that hygiene, in the form of preventive and social medicine, is in practice the basis of his activities, as useful as the curative medicine to which it is closely related. It is for the professor of hygiene to demonstrate by means of visits and lectures the various ways in which medical training can prepare the physician to play a full part in preventing and controlling disease and in reinforcing the health of individuals and the community in the light of social, economic, industrial, and other factors.

There must, of course, be theoretical and practical instruction in hygiene; but there must also be co-ordination and correlation of that instruction with previously acquired knowledge. This means that the professor must establish such close liaison with his colleagues teaching other subjects that they will not fail, whenever possible, to orientate their own expositions in such a way that he will be able to refer students back to what they have already learned from such colleagues and add his own teaching as a complement. This concept is all the more appropriate in that, in so far as their scope and orientation are concerned, certain Chairs are already in reality Chairs of social medicine (for example, those of phthisiology, venereology, obstetrics, paediatrics, neuropsychiatry).

While co-ordination is certainly necessary between the department of social medicine and other departments whose co-operation will be useful to it, the link between it and the professorial departments of forensic medicine and of industrial medicine must be one of real association. The Chair of forensic medicine is important not only from the point of view of the expert knowledge which is absolutely essential in the field of insurance and social security, but also from that of the moral and spiritual training of the physician, his psychological attitude to his professional and social mission and to his responsibilities. The task of the professor of industrial medicine must be to broaden the outlook of the student through knowledge of medical activities for the protection of industrial workers. But he must do more than that. Nowadays, through collaboration between ministries of health, labour, and social security, and within the framework of up-to-date legislation, more and more services and centres are being created for the rehabilitation of workers—not only those who have suffered some injury or who have been the victims of occupational or other accidents, but also those who are "handicapped" in general. The creation of these centres in regions in which our schools of medicine are situated is a logical outcome of co-operation between the hospitals and their staffs, the social security organization, and the faculties of medicine; and the medical profession as a whole should participate in the activities. This means that medical students must be given additional theoretical and practical

training and that post-graduate instruction should be available to practitioners.

The physician who has been prepared by appropriate training and made conscious of the " indivisibility of medicine " will better understand the role he can and must play in contemporary life; he will realize that he can practice, in varying proportions, both individual and collective medicine.

Social medicine, which combines humanism, in its cultivation of the human personality, with human economy, in its concern for output in health, work, well-being, and living, today constitutes an integral part of modern medicine; and, far from aiming at the disappearance of individual medicine, it enhances the latter's effectiveness and value. Although it must be inspired by the general directives which are applicable everywhere, social medicine must nevertheless adapt itself to local conditions and requirements. Moreover, it must not become static; it is vital, and must not be forced into a rigid pattern or hampered by sterile routine practices; it must seek to provide practical solutions to the problems which are continually raised by the conditions of modern life and by national situations, and to orientate and improve its activities in the light of medical and social progress. Nevertheless, its mission and its duties demand that in its collective undertakings it shall act towards each individual in accordance with the tenets of individual medicine, and maintain respect for the liberty and dignity of the individual and for the ethics of medicine, that being " social ", it shall nevertheless remain fundamentally " human ".

Apart from his collaboration within the general organized plan, the physician in his daily practice among individuals should not, as heretofore, confine himself to curative medicine: he should engage at the same time in preventive and social activities. The patient has certainly to be considered as an individual; but he is nevertheless a part of a whole, a unit in a community, whether it be the family, the workshop, or the town. The physician who practises individual medicine without taking into account his patient's environment and its influences, without asking himself whether he is contributing to the preservation or to the destruction of the family, is inadequate and a danger to society. The medical practitioner not only must have powers of clinical observation and judgement; he must also be trained to recognize the influence of the social as well as the physical environment.

With every day that passes medicine is extending its scope beyond the limits of the action and responsibilities which are normally assigned to it in the field of health protection, and it can no longer remain estranged from the social changes of the modern world; it must keep pace with them, and make a constructive contribution to the evolution of society.

Let us turn now to two questions which are examined by the authors of the monograph—the question of the separation or non-separation of

the departments responsible for basic education in hygiene and social medicine, and the question of the necessity for their permanence. Should existing professorial departments of hygiene be " doubled ", as they are in some countries, by having a separate Chair in social medicine ? There are, of course, special circumstances and local requirements which may militate in favour of this solution; but what is " social medicine " if not modern collective medicine which utilizes all health and social media liable to preserve the " health capital " of a country ? Hygiene, in the old sense of the word—sanitary engineering, epidemiology, preventive medicine —is in essence social medicine. Today, the teaching of hygiene is, in fact, the teaching of social medicine: it is merely a question of proper understanding and orientation of that teaching, combined with logical arrangement of medical studies as a whole.

Are we to believe that one day, when medical education in general pays more attention to preventive, economic, and social aspects, we shall be able to dispense with special courses in social medicine except in so far as a few special subjects are concerned ? It is to be hoped, of course, that teaching in the subjects in question will be constantly developed by the " health activity " departments, which must also be " social activity " departments; but, nevertheless, it is very probable that these courses will retain for a long time, if not always, their occasional, fragmentary character. If knowledge of social medicine is to be given a solid basis so that it may be envisaged as a whole, training must be systematic and homogeneous; it must be co-ordinated with, and complementary to, previously acquired knowledge, both theoretical and practical, of other aspects of medicine.

* * *

Post-graduate education is based on the concept of specialization. Such education, of variable duration, is available to holders of diplomas and is provided either by universities or by national schools and institutes of hygiene. Whereas uniformity is more or less the rule in the basic training, there are a number of variants in post-graduate education, according to the general organization, concepts, and needs of the country concerned.

The course for the diploma or certificate which opens the way to specialization in public health, and which is in many countries a compulsory prerequisite for a career in public health, is considered by many medical practitioners to be of value to them also for broadening their knowledge and making their activities more effective, not only in private practice but also in medico-social work, for which, with the diploma in question, they are more highly qualified. The fact that so many physicians who have no desire actually to adopt public health as a specialized career are nevertheless taking these courses would seem to be proof of the attraction of social

medicine. Moreover, such practitioners, by showing a willingness to collaborate in medico-social activities, are taking the best possible precaution against any possibility of State control of medicine.

The last stage of training—specialization proper as " medical hygienists " for candidates whose previous training has made them receptive to the instruction they must be given—can best be effected in national schools or institutes of hygiene or public health, some of which depend on the universities but most of which are attached to the ministry of health. Whether they are in the first or second category, there must be very close liaison between such schools and the faculties of medicine and their departments of hygiene and social medicine on the one hand, and between the schools and the ministry concerned on the other.

Without stressing the organization and the role of these schools (which, as far as details are concerned, vary considerably from country to country), it is interesting to note that they welcome not only health officers, but also other medical and non-medical personnel, sanitary technicians, hospital directors and administrators, medico-social workers—not, of course, for the purpose of obtaining basic training in their particular domains (which is provided by specialized centres on the basis of programmes adapted to the future activities of the personnel concerned), but in order that they may participate in certain common training. This common training is, in fact, particularly useful in establishing helpful contacts and facilitating future team-work.

It is the task of the school of hygiene not only to provide theoretical and extensive practical training which will start adequately qualified public health officers upon their careers; it must also ensure the " maintenance " of these qualifications by providing continuation courses for officers who are already in practice. The briefing of such officers by short, but fairly frequent, refresher courses will keep them abreast of new developments in the health and social fields and prevent their knowledge from becoming static and their activities from becoming progressively more sterile in an environment which progress and new requirements are constantly changing.

It cannot be too strongly emphasized that it is absolutely essential for the teaching programmes of the various categories which we have reviewed to manifest continual and progressive development of knowledge and to be mutually complementary while avoiding overlapping, on the one hand, and contradiction, on the other. They must form a homogeneous whole, founded essentially on the basic medical education, later developments being of value only in so far as that basic education has been conceived in the spirit referred to and has aimed at providing a solid foundation for future developments.

* * *

At the beginning of this introduction, we emphasized that the evolution of medical training institutions not only depends upon the progress of scientific knowledge and techniques, but also is closely related to the needs and aspirations of mankind. However, in a period when world events have revolutionized living conditions, there is a more than transient disequilibrium between the evolution of ideas and giving effect to them, between needs which become apparent and the means by which they are satisfied. New activities must, therefore, be encouraged, means and procedures improved, and an unremitting effort made to further the widespread application of socio-medical techniques on which, to a large extent, the improvement of the health and living conditions of the peoples of the world depend. This is the supreme task which WHO has set itself.

Future conferences will have ample scope for studying the details of certain elements in the training of the physician—not the physician as he is today, but the physician as he must be in the future.

Liaison between schools of hygiene is obviously necessary at the national level; but there must be, in addition, an international or, in the first instance, at least a regional, link between them.

Is WHO not called upon to meet this demand by facilitating the exchange of interested personnel through the award of fellowships, and by encouraging reciprocal exchange of experience and technical collaboration by arranging periodic meetings of the directors of these schools ? The collaboration thus achieved would foster the collective study of problems not only in education, but also in health and social welfare. Is not this a way in which schools of hygiene may be enabled to enlarge the scope of their activities and, at the same time, to contribute more largely to progress in the domain of public health ?

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