

ANNEXES

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Annex 1

EUROPEAN STUDY CONFERENCE
ON UNDERGRADUATE TRAINING IN HYGIENE
AND PREVENTIVE AND SOCIAL MEDICINE

The European Study Conference on Undergraduate Training in Hygiene and Preventive and Social Medicine * was held in Nancy, France, from 8 to 13 December 1952, under the auspices of the World Health Organization. Following discussion, in the light of the experience of the participants, of the papers submitted by the Rapporteurs, taking into account the fact that developments in health problems require a continuing adaptation of medical teaching, and considering the part the physician has to play in modern society, both with respect to individuals and their families and to the community as a whole, the conference participants reached certain conclusions, which are summarized below.

Most future physicians will be general practitioners, which requires that they shall have had a well-balanced training. The conference participants were convinced that the medical curriculum should have a preventive and social orientation at an early stage. It should provide future physicians with the knowledge and skills needed not only for the diagnosis and treatment of disease, but also for the promotion, maintenance, and protection of health through application of the methods of hygiene and preventive and social medicine.

To this end, the conference participants agreed on the following points with respect to the teaching of hygiene and preventive and social medicine:

1. It is desirable to provide a short introduction to medicine in the first year of the medical curriculum, in order to give students a general idea of medicine as a whole (both curative and preventive), to refer to the needs of society, to awaken their interest in prevention, and to point to the moral satisfactions and material advantages of efforts made in preventive medicine, as well as in curative medicine.

2. Subjects included in the curriculum of studies in hygiene and preventive and social medicine can be introduced progressively during the

* Early in the discussion it became apparent that it would not be easy to formulate definitions which would command general acceptance. In this report the expression "hygiene and preventive and social medicine" is used to refer to the subject-matter usually included in teaching practice under the headings of public health, preventive medicine, social medicine, hygiene, and epidemiology.

following years. It would be particularly advantageous to deal with statistical methods and biometry in the pre-clinical period of study, and to ensure that preventive and social viewpoints are adequately represented in an orientation course at the beginning of the clinical years.

3. The content of curricula will vary in matter of detail according to local conditions, but it is desirable that every curriculum should be comprehensive enough to enable the future physician to become acquainted with essential objectives and methods and to give him a preventive and social point of view. The course of studies in hygiene, preventive medicine, and social medicine should take into account physical, biological, psychological, sociological, and economic factors which influence health and well-being.

4. Professors in other disciplines should be invited to undertake or to collaborate in teaching on aspects of preventive and social medicine related to their special fields. Responsibility for the general arrangement of teaching programmes in hygiene and preventive and social medicine, and for the presentation of a comprehensive point of view, should be retained by the professor of this discipline. To cover the field of hygiene and preventive and social medicine, the collaboration of many individuals, working as a team, is invariably required.

5. Bacteriology, including in a broader sense microbiology and immunology, is a well-established science which requires presentation by a full-time teacher. In certain circumstances, it is expedient that, for the time being, instruction in the epidemiology of the transmissible diseases should be undertaken in combination with bacteriology. Hygiene and preventive and social medicine, however, cover a wide terrain, and to have these subjects taught under the direction of a department of bacteriology is to the disadvantage of both.

6. It is important that the faculty of medicine, and especially the department of hygiene and preventive and social medicine, should collaborate with the health services of the community for the purposes of practical teaching. The academic department can also act in an advisory capacity in relation to community services.

7. It is advantageous to employ various methods in the teaching of hygiene and preventive and social medicine. Such methods include seminars, visits to institutions, surveys, and, particularly, periods of attachment to health centres and domiciliary health services. It is necessary to relate teaching to concrete situations and current clinical cases. The future physician should also have an opportunity to work as a member of a team which includes public health nurses, social workers, and other health personnel. A student health service can also be valuable in the teaching of preventive medicine.

8. Research work in the field of hygiene and preventive and social medicine is necessary to sustain the vigour of a teaching department. This implies a properly housed and adequately staffed department, under the direction of an experienced and competent head, having at its disposal the necessary equipment and material means. The solution of the problems raised by these requirements must have regard to the limited resources of the universities and will often need the assistance of non-university agencies and organizations.

In the opinion of the conference participants, the faculty of medicine should periodically examine the curriculum of medical studies in order to make adjustments, to fill gaps, to avoid overlapping, to avoid overburdening the curriculum, and to prepare future physicians to fulfil their tasks in a changing society.

The importance of continuing and developing international collaboration was stressed as a means of strengthening the position of preventive and social aspects in medical training. The conference participants were convinced that the progress already made in the orientation of medical studies towards prevention will be further developed and more widely implemented. New concepts and methods might be very useful in other countries once they are adapted to the curriculum appropriate to the conditions in a specific country. An exchange of opinion at an international level helps to make known to all countries the progress realized in each country.

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Annex 2

EUROPEAN STUDY CONFERENCE ON POST-GRADUATE TRAINING IN HYGIENE AND PREVENTIVE AND SOCIAL MEDICINE

The European Study Conference on Post-graduate Training in Hygiene and Preventive and Social Medicine was held in Göteborg, Sweden, from 6 to 10 July 1953, under the auspices of the World Health Organization.

The participants in the conference—22 professors of hygiene and public health and other experts from countries in the European Region—devoted their attention to post-graduate training in public health. Many aspects of the subject were dealt with, including the aims of training, the special requirements of medical officers, and the content and method of teaching. In the course of the discussions, the participants were aware that on many subjects there was complete agreement; nevertheless, it was not the intention of the conference to try to secure unanimity or to reach any definite conclusions. The main objective, which was amply fulfilled, was to achieve a free exchange of ideas. Each of the participants had a helpful contribution to make from his personal knowledge and experience.

Shortly before the opening of the conference at Göteborg, five documents were prepared by certain members to form a basis for discussion by the group as a whole. In addition, each country transmitted in advance a descriptive account of its facilities for post-graduate teaching in public health and an estimate of its requirements and objectives. Most of these preliminary accounts were prepared by teachers who were taking part in the conference. In the course of the discussions, the authors of the five documents referred to above made use of their own material to serve as introductions to each of the sessions. It was found that a division of the subject-matter was convenient, although it had no logical basis. The short report which follows retains a broad division of subjects but does not present the discussions in any chronological arrangement.

Objectives and aims of post-graduate training

The conference participants agreed that the responsibilities of governments—whether local, provincial, national, or otherwise—towards their people could best be undertaken in the field of health under the supervision and stimulation of full-time public-health officers. The actual executive

work depended on many factors, including population, nature of the country, and general organization of the services. In some areas general practitioners combined their public health duties with clinical functions in relation to individual patients, and it was in this type of organization especially that the encouragement and supervision of a number of full-time officers was desirable.

In France a triple scheme of training had been built up through the years. In the first period, the undergraduate phase of teaching, the faculties of medicine of the university prepared the students in elementary hygiene and in the social aspect of medicine. In the second stage, a certain number of medical faculties trained post-graduate candidates especially for a diploma in hygiene. These candidates received a *Certificat d'Hygiène et d'Action sanitaire et sociale*. This group included a number who had no intention of making a career in public health but who benefited from the certificate in the exercise of their particular profession—for example, those occupying posts as public medical officers for vaccination, etc., in child health and in school medical inspection. This certificate had proved to be very valuable for those who undertook public health work on a part-time basis. For the third stage of training the candidates had already been selected as members of the national public health service and were paid a salary during the training period. The training in this case was undertaken by the national school of public health, a school which was under the direction of a professor of the university and which was designed to give a thorough practical training in the administrative and other techniques of officers of public health. It was essentially a practical school and had been created for the purpose through the Ministry of Public Health; the role of the school was complementary to undergraduate and post-graduate training in public health, and its graduates automatically became a part of the government service.

Where district medical officers were employed on a part-time basis, combining their health functions with clinical duties, they should receive a limited course of training in public health. But the main problem before the conference was the question of post-graduate training for the full-time health officer. It was recognized that even in a country where combined functions existed there would always be need for a number of full-time medical officers in charge of units such as counties or other areas with supervisory and co-ordinating functions.

The main objective in training the full-time officer was expressed as "giving him what he needs to help him to do his job better". This emphasized the practical aspects of training and the need for work in the field under supervision. A good deal of discussion ranged round the duration of training of this kind; it was felt that in order to prepare a candidate for the functions of the full-time officer, training of at least one academic year was necessary. Indeed, the view was expressed that a

further period of practical experience and field work should follow the academic training. One of the difficulties in a programme of this kind was that a medical graduate, after having followed an extensive and lengthy course of education during his undergraduate period, was often unwilling to undergo another year of preparation in order to qualify for a full-time position in public health. He might well feel that the rewards of such a career compared unfavourably with those of other forms of medical practice. The opinion was widely expressed that a government, in attempting to discharge its responsibilities towards its people, should accept some part at least of the burden of preparing professional workers to carry out their functions, and that subsidies should be available for this purpose, with appropriate safeguards.

On the question of the organizational position of the school of public health, three patterns were outlined:

- (1) a school of public health within a university framework, either as part of the medical faculty or closely associated with it;
- (2) a completely autonomous unit; and
- (3) an institution within the national health service and under the direction of the national ministry of health.

The administrative structure, the educational traditions, and the social and political opinions within a country would determine which of these patterns should be followed. Whichever of these was to predominate, a school of public health must be free to pursue its educational functions in a spirit of inquiry and experiment.

Subject to these general requirements governing the ultimate authority for teaching there should be a full-time staff in the principal teaching institution, headed by an experienced specialist in hygiene and public health. It was desirable to have independent professors of the several main subjects, such as epidemiology, biostatistics, public health administration, and sanitary science, and to offer adequate opportunities in each department for research and practical field-work as well as academic teaching. The students of public health should regard the community as their "laboratory", and with this object in view the school should be affiliated to public health units at the several levels of government. The faculty might be further strengthened in its teaching duties by utilizing the part-time services of qualified persons engaged in active practice of the many branches of public health, medicine, and the social sciences.

Although the main discussion referred to the training of medically qualified health officers, it was agreed that schools of public health should admit to their student body other categories of health workers; for public health was not only a medical function, but required the services of nurses, engineers, veterinarians, and others.

Training of medical officers

In the discussion on the post-graduate training of medical officers, there was some divergence of view about its relation to undergraduate teaching of preventive and social medicine. On the one hand, it was argued that post-graduate training was a natural extension of the education given during undergraduate studies; for example, an extensive undergraduate education in preventive and social medicine could be balanced against a shorter post-graduate training, and vice versa. It was pointed out, however, that the content and purpose of undergraduate teaching in these subjects and of training in public health during the post-graduate period were different because the objectives were different. A medical officer of health had many legal, environmental, and community functions which were not shared by the general practitioner and required highly specialized academic and practical training for this purpose. It was generally agreed that a health officer would find his tasks much easier if he were supported in his community by a corps of physicians who practised preventive and social medicine in every phase of their daily work; but, even with such ideal conditions, he still had specific public-health tasks to perform. One of these tasks would be to offer opportunities for general practitioners in his community for the study and practice of social medicine in their everyday work.

It was accepted that public health work consisted mainly of team-work among the various members of the health professions, the representatives of government, and the population at large. This concept ought to be emphasized from the earliest days of post-graduate training. It was advisable, therefore, to bring the future health officer into early and close contact with those who were to be his co-workers in the field. In those institutions which already practised this method of training, members of the several professions concerned with public health—physicians, dentists, engineers, nurses, statisticians, health educators, and others—should attend classes together during that part of training in which the subjects were relatively elementary; and field work should be so arranged that they might attend together and become thoroughly familiar with one another's attitudes and techniques. More important than this in the encouragement of team-work among public health staff was the inculcation of ideas of leadership, especially in candidates who were likely to become health officers and so leaders of a team. It was impossible to formulate any plan of teaching because the qualities of leadership were largely inherent; and, in any case, the idea of leadership took on varying forms under different societies and cultures; and, therefore, each country would have to formulate its own method of developing this important quality.

In addition to leadership, one of the chief functions of the public health officer would be to co-ordinate all the health efforts within his community. These functions of co-ordination were closely related to the qualities of

initiative and leadership, and it followed that a school of public health must accept responsibility for preparing its students in this respect as well as in the technical aspects of public health.

Content of teaching

The content of teaching in the school of public health, as in every educational institution, ought to be in accordance with the characteristics of the community served. The school of public health must therefore adjust its curriculum so that some of its teaching bears on the problems of its own society. This does not imply that consideration should be given only to local problems; on the contrary, elements of world-wide significance would fill a considerable part of the picture. Some participants suggested that the close affiliation between a school of public health and the problems of the locality meant that there ought to be a school in each region which covered similar problems. Others felt that the needs of a broader education could be met by sending senior students abroad on fellowship grants. The conference participants as a whole came to the conclusion that a balance between the two views was desirable.

The opinion was also expressed that one of the chief functions of a graduate school of public health was to re-orient the students from an individual clinical approach to medicine to one in which social and community considerations received a larger share of attention. To achieve this an introductory period of study would be necessary to demonstrate the position of preventive and social medicine in general, this to be followed by the main period of specific teaching. A full discussion of the content of teaching in post-graduate schools led to the recognition that it must vary continually with the evolution of cognate sciences, on the one hand, and of social development, on the other. It was of the utmost importance that regular adjustments to the course be made to meet these developments. As one of the fundamental aims of training was to produce full understanding of modern epidemiology, the teaching in this subject, with biostatistics as one of its essential components, should pervade the whole training. This, of course, explicitly required an expansion of bacteriology into the epidemiology of infection, but it meant also, even more strongly, an extension to cover the whole range of disease to which epidemiological methods could be applied. It should cover all departures from health, mild as well as severe, and studies of the social factors upon which health and deviations from health depended. Side by side with epidemiology and biostatistics must be placed teaching in environmental hygiene, occupational health, and social hygiene, as well as the elements of the social sciences. Great emphasis was laid upon the expanding scope of the social aspects of health and sickness which lay at the very heart of preventive medicine.

A significant part of this new approach to public health was the appreciation of the place of psychology and mental health. The functions of a

health officer and his co-workers were now directed more strongly towards the education of the public in health matters. It was considered that long-range improvements depended on the understanding and co-operation of the public and their representatives in government. For this reason the public health worker must be trained to an understanding of the aims and techniques of the psychologist; such teaching was also necessary in order to provide a basis for a mental hygiene programme in public health services.

With so many different subjects to be taught, the conference participants considered it necessary to lay special stress on synthesis of training so that students should gain an understanding of the balance and the proper relationship of one subject to another and, above all, that they should appreciate that the essential function of the teaching is to provide training in the protection of the community's health. It was of great importance that a curriculum should not become static. An educational process was experimental, and the subject-matter of teaching should undergo change from time to time. The object of these changes should be to stimulate thought and initiative and to anticipate, so far as possible, developments in the health and social services.

Methods of teaching

In their discussion on the content of teaching, the conference participants gave attention to the type and quality of the health officer, and they laid special stress on leadership and ability to co-operate with others following the same general lines of thought and practice. A health officer should be primarily a teacher able to convince others of the significance of health and to interpret its scientific applications in simple and unequivocal terms. To these essential qualities one must add the acquisition of learning—not, of course, a detailed knowledge of the sciences associated with health, but the knowledge sufficient to co-ordinate these sciences and to interpret them to government and people in simple terms. In post-graduate teaching it was important that too much stress should not be laid on the didactic. The comparative maturity of students in a post-graduate school enabled teachers to guide them to apply their knowledge by methods of self-education such as tutorial discussions in groups, seminars, study groups, and, above all, personal observation and practical work in the field.

In addition to academic methods of study, it was important that students should take a personal part in practical work such as school health service, the administration of the office of a health officer, the study on the spot of rural health problems, and detailed observations of occupational health services. Similarly, students should be encouraged to undertake investigations through the medium of those who actually perform specialized functions, such as architects, sanitarians, hospital administrators, and welfare officers. Practical laboratory work in special subjects was still an important feature of teaching, but the time available was becoming pro-

gressively limited; and, in many institutions, instruction in subjects such as bacteriology, parasitology, and chemistry had to be concentrated on giving the student sufficient knowledge to be able to interpret scientific findings rather than perform the actual tests and examinations, which had become highly complicated. In biostatistics, however, the practical applications of theory remained of great importance in illuminating the subject for the student. Finally, health education gained much through students' handling the actual material of teaching, e.g., broadcasting, films, and other illustrative matter.

In the course of discussion, the contributions ranged round the difficulties of selection of subjects in order to avoid the overloading of the curriculum. The balance between formal teaching by lectures and self-education by such methods as personal observations, daybooks, and dissertations was fully discussed. No one series of answers could be given, as methods must necessarily vary with the quality of the students and the extent of their undergraduate education. It was felt that post-graduate education in public health had many elements in common with all post-graduate teaching, and was intended to develop a critical sense and a knowledge of principles. Lectures should always be followed by free discussion; and, as it was not possible to cover the vast sphere of post-graduate knowledge, much of the teaching had to be in the nature of illustration. Teaching by seminars and study groups had the great advantage of encouraging each student to play his part and also made it possible for nurses, engineers, and auxiliary health workers to make their contributions to the study as a whole.

It was recognized as essential that all physicians should have a good education in health; the health officer, however, should, in addition, be a teacher and an interpreter of health practices to the community, both as a whole and as families and individuals. In other words, health officers had to be trained in teaching as well as in practice.

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