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SOME GUIDELINES FOR POSTGRADUATE TRAINING IN
PUBLIC HEALTH

by

Dr. T. Fülöp*

The social and economic development of the countries in the geographic areas covered by the Africa, Eastern Mediterranean, South-East Asia and Western Pacific WHO Regions has accelerated in the last two decades and the same acceleration is apparent in the improvement of the health situation, embracing the education and training of health personnel which includes also postgraduate public health training.

Out of twenty-two Schools of Public Health from these Regions, listed in the World Directory of Schools of Public Health, taking into account for each school the year when the public health course started, sixteen were established during the last twenty-five years, and of the latter, ten were established in the last ten years; four schools were established in the last five years. It could be said that in the last ten years the average has been about one new school per year. However, only twenty-two of the hundred Schools of Public Health listed in the World Directory are

* Chief, Post-graduate Education, Division of Education and Training,
WHO Headquarters, Geneva.

situated in these Regions, where lives two-thirds of the world's population. In the WHO African Region, south of the Sahara, there are no such institutions at all. It is generally agreed today that the best solution for providing health manpower is to offer training locally. Hence the great need in the near future to open a number of new Schools of Public Health in these regions. While in Europe there is a population of twelve million to one School of Public Health, and in the Americas eighteen million, in Asia the ratio is fifty-seven million and in Africa two hundred and ninety-three million.

The creation of new schools raises several problems. It is clear that before setting out we must know where we are going, i.e., we must have already defined the purposes. Peculiarly, this is not always the situation in the field of education. People are often trained without a clear indication of the objectives of the training, that is to say, it is not well defined what the educational process will qualify the student to do that he could not have done prior to his training. In this way it is difficult to state at the end of the training whether or not its objectives have been achieved. Obviously, objectives clearly defined and well expressed in behavioural terms should simplify the evaluation of training.

In order to define the objectives, it is necessary to know the needs. Whether in establishing a new School of Public Health or in remodelling the curriculum of an already existing one, the first question to be answered is: What are the real needs to be met by the graduates in the countries where they are going to work? Answering this question requires certain surveys to be made:

1. A task analysis should be made to show the actual performance of the various categories of public health workers;
2. An investigation should be made as to the opinions and expectations of these workers in regard to their jobs and tasks;
3. An investigation should likewise be made as to the expectations of both supervisors and public in respect of the above workers;
4. An analysis should be made of the epidemiological situation in the country.

The surveys under 2, 3 and 4 above will help find out what proportion of the requirements are actually met by health workers.

The information thus obtained would make it possible to draw up job descriptions for the different types of public health workers. The objectives of the various courses should obviously meet the requirements of these job descriptions, taking also into consideration as far as possible future needs and scientific progress, and should challenge students to take more advanced training. This would permit fitting training to local needs which - though being tailor-made - would not result in a curriculum that has the disadvantage of being too much "job-oriented", which would reduce the importance of such a course. There are of course different levels of training, e.g. the basic professional course, providing a comprehensive broad programme in relevant health sciences for the training of the public health generalist or the graduate programme offering advanced instruction and opportunities for independent study in depth for those seeking to specialize in one of the public health disciplines. However, the principle of setting up objectives for courses remains the same regardless of the different levels of these courses: they should point towards the

present and future needs of society and should be defined in terms of specific skills students are expected to acquire by the end of the training. Once the objectives of the course have been stated, it will not be difficult to select and organize the content and to select and organize thereafter the learning experience required to meet these objectives. Likewise, the ways and means of evaluation will be made simpler once that which we must evaluate is clearly defined.

The mere fact that approximately one fourth of an outstanding Public Health School's graduates have undertaken careers in teaching led the School to establish a Seminar of fifty hours duration on the teaching of preventive medicine and public health. In the last academic year about one third of the School's students were attending this elective course, which is indicative of its necessity. This raises the question whether it would not be useful to organize such electives also in other Schools among whose graduates many enter the teaching careers.

Another tendency, which might be observed in some schools, is the overshadowing of environmental health and the coming into prominence of management sciences and techniques in the curricula of basic public health courses. A discernible trend in many schools of public health is the concentration on the principles and techniques of decision-making and - generally speaking - of health management. For example, the percentage of faculty time devoted to the teaching of environmental health and allied sciences was reduced from 36% in 1965 to 31% in 1968 in the schools of public health in the US and Canada. Evaluation of the needs and formulation of objectives on this basis leads to the conclusion

that environmental health in some regions is gradually losing its importance within the scope of the public health workers' assignments; on the other hand managerial work, i.e. - among other things - analysis of the health situation, decision-making as to priorities, planning, management and implementation of plans and evaluation, gain an increasingly important place in the day-to-day work of most public health workers. Already in certain schools, environmental health is taught only as an elective within the framework of the basic public health course. It is quite understandable that the emphasis has shifted in the last decades as a consequence of the expanding organization of health care and administration. The medical officer, traditionally concerned with the prevention and control of disease as a community phenomenon, has also become increasingly responsible for the organization of personal health care, as society has come to recognize the social implications of disease and handicap. In order to be able to decide where to place the emphasis, one must obviously first exactly know what are the actual needs. In this respect one could take into account the growing demands in health management, with which most public health workers must cope nowadays.

A WHO Consultant Group on Research in Public Health Practice, which met in Geneva in December 1968, drew attention to the training now required for senior health administrators and to the contents of the modern postgraduate public health curriculum, stressing in particular the managerial function of the health administrator and the multidisciplinary character of present-day public health practice. The Group

concluded, among other things, that health planning and the techniques for collecting and analysing data - survey methods, projection methods, mathematical modelling, computer simulation, economics and accountancy - should now be included in a general postgraduate public health curriculum. The Group also stressed the need to bring together the resources of health administrators, epidemiologists, demographers, social scientists, economists, statisticians, and computer technologists. This, too, should be reflected in the post-graduate training of health managers and could be achieved by a method which has proven its value - namely, integrated teaching. (This will be referred to again later). Summing up, one can say that there is a strong tendency to adopt curricula based on the behavioural and managerial sciences as well as on the biomedical sciences. One must emphasize once more that the curriculum should reflect the objectives for which it is designed.

The needs and objectives once defined, will also determine the learning experience to be selected. Recognizing the fact that more and more public health workers are not merely accomplishing the task assigned to them, but are also seeking, finding and solving problems, leads to shifting the emphasis on methods of self-instruction, on facilities being offered to students in view of developing their capacity for problem-finding and problem-solving within the context of organized health activities. In some schools one-third, in others one half of the time allotted to basic public health courses is devoted to electives while field practice is also gaining in importance. There are in these regions also schools where the ratio of the electives is either one-third or one half (India, Indonesia, Iran, Israel, Japan, UAR), it may, however,

not be merely accidental that all of these schools were established during the last fifteen years. Similar remarks could be made in respect of time devoted to field practice.

The changes in learning experience made necessary, in order to meet the objectives involved, among other things, a broader use of the case-study method, of simulation techniques, audio-visual aids, programmed instruction, as well as the new trend in certain schools to teach not only theory and principles but also the way of putting these into practice, and of adapting them to different circumstances. These tendencies are steadily spreading and would need to be further strengthened.

A new development in the field of learning experience is the integrated, i.e. topic-oriented, course. It is recognized in some schools that it would be unreasonable to expect a student upon graduation to take a broad integrated view of the health field and to consider the widest possible set of health demands in all their contexts and relationships, if his experience in school has been narrowed to a few single areas, such as, Maternal and Child Health, Hospital Administration, etc. It would similarly be unreasonable to expect a graduate to view in a balanced perspective the numerous competing claims on limited health resources, if he has witnessed in his own school, isolation of and competition among departments and disciplines. The public health workers will be part of teams and must not only have a broad and integrated outlook in health, but also think in terms of the other specialties, e.g. social sciences, economics, etc. The curriculum of a school of public health should serve concurrently the conflicting needs for comprehensiveness and integration on the one hand, and specialization on the other. This

could be achieved by offering a curriculum in which the first part (perhaps one half) of the courses is built around the topics concerned with methods of defining society's health needs and problems, then with the resources and activities suitable for solving the defined problems, and, finally, with methods of managing the problem-solving, including planning and evaluation. The various disciplines, instead of providing isolated explanations on their own themes, should each contribute to discussing the above topics, in order to help the students acquire an integrated way of thinking, that is involving all disciplines, in a process which concentrates on problem-finding, problem-solving and management of solving. The second part of the course might be devoted to electives, field practice and research activity, independent study with a tutor's guidance, promoting self-instruction, an independent way of thinking and some specialization.

The learning experience should be organized so as to promote as far as possible the active participation of students in the teaching-learning process, and to give them the necessary motivation to continue their studies after graduation.

The whole teaching and learning process of a school, the curriculum and the learning experience, the performance of both its Faculty and graduates should be systematically evaluated in terms of the school's own stated mission and of the objectives of the courses. It is necessary to evaluate to what extent graduates meet the specific needs of the community they are serving. The results of such an evaluation will then lead to a periodic review of the objectives that have been set, of the curricula and of the learning experience.

The establishment of special Departments of Education within public health schools might greatly contribute in improving the teaching and learning process and in applying medical pedagogy. Several schools have already introduced such units and their impact has proved to be fully beneficial. It is well known that a difficult task is the recruitment of suitable teaching staff. The latest results of educational psychology and its application to education and training in the health field, the so-called medical pedagogy, should also be applied in public health schools. This means that the teaching staff should not only be well trained in the subject matter in question, but should also know the theory and practice of curricula design, of the teaching and learning process and of the student and teacher performance evaluation. It seems desirable that teachers - those already engaged in teaching and teacher trainees - be strongly exposed to the theory and practice of medical pedagogy. The so-called "centres of excellence" might be also used for this purpose. Moreover a further study of medical pedagogy might help to exploit all the advantages of local training of health personnel, that is, the consideration of local needs in training. These might be also facilitated by the Departments of Education.

The same principles (stated above), apply to continuing education in the field of public health. Refresher courses, regular further and advanced training of public health workers, must always be adapted to the local needs both as to contents and learning experience. Catering for continuing education tends to become an integral part of the public health school's activity

Improvement of the teaching and learning process, while always taking into account the local needs, may also lead to the promotion of the mutual recognition of public health schools and of their diplomas.

WHO has always paid particular attention to postgraduate education in public health and to the activities of schools of public health. Without going into too much detail let us mention here fellowships, research grants (during the decade 1957 to 1966, of the 17 396 fellowships awarded by WHO, 52% were for the study of health service organisation), equipment, visiting lecturers, and other forms of WHO assistance to schools of public health. In the last ten years, two Expert Committees, a Study Group and in 1966 an Inter-regional Conference of Directors of Schools of Public Health were held in Geneva. Their participants discussed some of the more important questions raised in connection with schools of public health. A series of regional meetings and certain other activities have undoubtedly also contributed to development in this respect. An important meeting was the Second Regional Conference of Directors of Schools of Public Health from the Africa, Eastern Mediterranean, South-East Asia and Western Pacific Regions of WHO which was held in Manila in 1967. We now have the pleasure of participating in what might be termed as a continuation of that meeting.

Of course, it is neither possible nor necessary to enumerate here all the important aspects in the development of postgraduate public health training. Though WHO has already largely contributed in fostering agreement on the key elements of this type of training, it is fully realized that much remains to be done, and the Organization is determined to pursue its efforts in this direction.

SUMMARY

1. The quantitative development in the field of postgraduate public health teaching has been rapid in the last decade in geographic areas covered by the Africa, Eastern Mediterranean, South-East Asia and Western Pacific Regions of WHO. However, there still seems to be a need for a number of new schools of public health.

2. The latest results of educational psychology and particularly its application to training in the health sciences, namely medical pedagogy, might be broadly used in postgraduate public health training. The first prerequisite is training in medical pedagogy both for future teachers in public health schools and for those now engaged in this type of teaching.

3. The advantages of local training for the health professions (both in the case of basic and advanced training for public health generalists and specialists) may be fully exploited when the objectives are based on local needs which have been evaluated by scientific methods.

4. Some aspects of recent developments in basic postgraduate public health training mentioned here are:

(a) in the curricular field:

(i) concentration on the theory and practice of health management,

(ii) teacher training seminars for future teachers of preventive medicine and public health;

(b) in the learning experience:

(i) self-instruction;

(ii) development of the students' problem-finding-solving-
and managing capacity;

- (iii) promoting integrated teaching;
- (iv) the gradually broader use of some of the new tools of teaching (small group discussions, case-study method, simulation technique, programmed instruction, some more sophisticated forms of audiovisual aids, etc.);
- (v) research intended to promote independent thinking by students.

5. The creation of Departments of Education might help to improve yet further the teaching and learning process in public health schools.

6. Continuing education, based on the same principles as those mentioned for basic and advanced training, is becoming more and more an integral part of a school's activities.

7. The further improvement of teaching and learning processes - both in terms of content and methods - might help to promote mutual recognition of public health schools and of their diplomas.

8. WHO has always paid particular attention to postgraduate education in public health and is prepared to continue this effort in the future.

SOME REFERENCES

WHO

Cottrell, J.D., Kesic, B. & Senault, R. (1969) The teaching of public health in Europe (1969) Wld Hlth Org. Monogr.Ser. No.58

FULöp, T.: Report on duty travel to the United States, 20 April - 11 May 1969. (Unpublished paper)

Grundy, F. (1969) Schools of public health, WHO Chron., 1969, 23, 251-255

Grundy, F. & Mackintosh, J.M. (1957) The teaching of hygiene and public health in Europe. A review of trends in undergraduate and postgraduate education in nineteen countries Wld Hlth Org. Monogr. Ser. No.34

Inter-regional Conference of Directors of Schools of Public Health, Geneva, 29 August - 2 September 1966 (1967) Report Wld Hlth Org. techn. Rep.Ser. No.351

Rao, K.N.: Medical education and public health teaching in Latin America 6 June - 31 August 1968. Report (Unpublished PAHO/WHO document)

Second Regional Conference of Directors of Schools of Public Health from the Africa, Eastern Mediterranean, South-East Asia, and Western Pacific Regions of the World Health Organization, Manila, 6-10 November 1967. Final report (Unpublished WHO document WPR/260/67)

The second ten years of the World Health Organization 1958-1967, Geneva, World Health Organization, 1968, pp. 84-85

Symposium on Schools of Public Health in Europe, Rennes, 14-18 December 1964, (1965) Report, Copenhagen, Regional Office for Europe, World Health Organization (Unpublished WHO document EURO-304)

World directory of schools of public health 1965, Geneva, World Health Organization, 1968.

WHO education and training activities. A review, 1958-1967. (Unpublished WHO document ET/67.2)

World Health Organization Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel (1959) The foreign student and postgraduate public health courses. Sixth report Wld Hlth Org. Techn. Rep. Ser. No.159

World Health Organization Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel (1961) Recommended requirements for schools of public health. Tenth report Wld Hlth Org. Techn. Rep., Ser. No.216

World Health Organization Study Group on Special Courses for National Staff with Higher Administrative Responsibilities in the Health Services (1965) Report Wld Hlth Org. Techn. Rep. Ser. No.311

American Public Health Association Committee on Professional Education (1969) Criteria and guidelines for accrediting graduate programmes in community health education Amer.J. publ. Hlth, 59, 534-542

Anderson, G.W. (1967) Teaching of Public Health in a university. Responsibilities of a school of public health Bol. Ofic. sanit. panamer., 62, 111-119

Behm, H. & Gutierrez, H. (1964) Demographic training in schools of public health. With special reference to the University of Chile Milbank mem. Fd Quart., 42, 287-298

Criteria and guidelines for accrediting schools of public health (1966) Amer. J. publ. Hlth, 56, 1308-1318

Parlette, G.N. & Leonard, A.R. (1968) Continuing education in public health. The experience of the Western States, 1959-1966 Amer. J. publ. Hlth, 58, 558-568

Première Assemblée générale de l'Association des Institutions responsables d'un Enseignement supérieur en santé publique et des Ecoles de Santé publique in Europe, Zagreb, 7-11 octobre 1968 (working documents)

Roemer, M.I. & Gomez, H.A. (1968) La enseñanza de la atención médica en las escuelas Latinoamericanas de salud pública. Plan de estudios para la maestría en salud pública (1968) Bol. Ofic. sanit. panamer., 64, 204-218

Thomas, W.C. & Hilleboe, H.E.+ Curricula of schools of public health: a proposal for needed revision (in press).

Troupin, J.L. (1964) Education for public health Canad. J. publ. Hlth, 55, 417-423

Troupin, J.L. (1968) Schools of public health in the USA and Canada (Year ending June 1967) Amer. J. publ. Hlth, 58, 777-781 (See also: American Public Health Association document CPE-68B5)

Wegman, M.E. (1969) Educational implications for health workers and the public Arch. Environm. Hlth, 18, 293-297.