Chapter 37. Training teachers for health workers

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To develop health services so that they cover a greater proportion of the world's population we need more health workers, and to train more health workers appropriately we need more teachers. Health workers of all kinds are required and it should be appreciated that there is a continuum of knowledge and skills from the simplest first aider up to the professor of paediatrics. Though there may be disagreement about what individuals or groups should be called – auxiliary, assistant or paramedical – and about the level of knowledge and skills that they should have in general or specialist fields, no health service can function efficiently without staff of all levels.

In this chapter all these people will be called health workers. Figure 37.1 indicates the years of background and vocational training that they may receive and illustrates the continuum that exists in reality, even though this may be resented by some at the upper end of the line. With continuing experience and education, individuals may progress up the line. In some countries opportunities are provided for recognition and re-grading of such people while in others the trade union activities of professionals limit such movement. In all countries the possibility of slipping down the line also exists because of isolation and failure to keep up-to-date but in few is it recognised and adequate steps taken to prevent it happening.

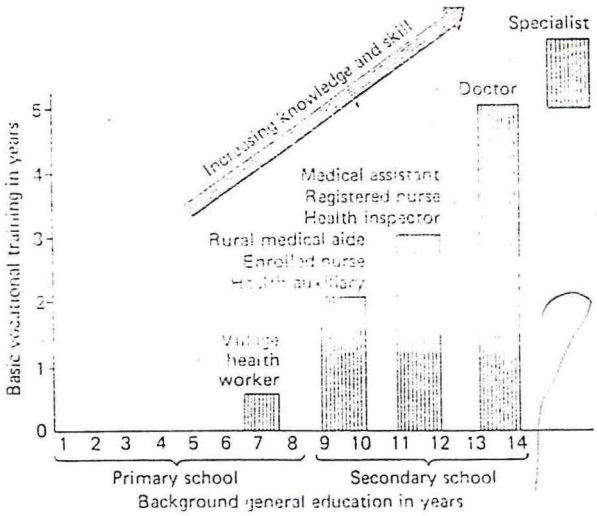
The skill pyramid is often referred to, representing the most highly trained specialists at the top with layers of others with less training below, with the most simply trained auxiliary health worker at the bottom (figure 37.2A). Most of the world's population receive their medical care from those near the bottom of this pyramid. However, when the number of staff actually available are looked at in greater detail, it is often found that the pyramid is much less regular in shape than anticipated. In practice it may well be a dumbbell or a diamond (figures 37.2B, 2C).

This discussion of the training of teachers for health workers is based on the following premises, that:

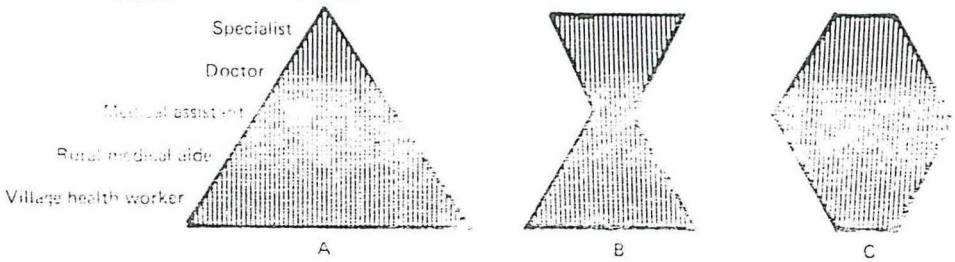
(1) Health workers with relatively simple training can play a vital role in extending the activities of a health service;
(2) There is, in most countries, an acute shortage of such people;
(3) Training more of them is a high priority;
(4) More attention needs to be paid to their continuing education.

DEVELOPMENT OF HEALTH WORKER TRAINING

In the past the training of health workers has, in many countries, developed in a somewhat haphazard way. In the early days doctors and nurses, often working by themselves at small government or



37.1 The continuum of knowledge and skill.



37.2 The skill pyramid and other shape

mission hospitals, found themselves in need of help. They therefore employed the most intelligent people available and gradually taught them to do the jobs required. Such *ad hoc* recruiting and in-service training has often been developed and gradually formalised to a more regular apprentice-type training with some kind of test on completion.

Though these early training programmes lacked any kind of standardisation, they had several great advantages. The teachers were generally experienced workers who had a fairly clear idea of the jobs for which they were training new health workers, and the number of trainees involved were small. This allowed close teacher-student contact and a great deal of practical work.

As the very valuable contribution made by these new health workers became more widely recognised, training was increased and became more formalised. Selection of trainees was based on minimum levels of background education, curricula were standardised and national qualifying examinations were introduced. At the same time the number of trainees increased and they were grouped into classes; staff became full-time, or nearly full-time, teachers. More theoretical work was added and, with larger classes, this was often at the expense of practical work and supervised apprentice-type learning.

New facilities were developed for these schools which sometimes became divorced from the practical activities of the hospital or parent institution. At the same time the selection of teachers changed from self selection of busy experienced practitioners wanting to train people to help them, to full-time teachers, often with less practical experience, who may have chosen this alternative activity but just as often may have been directed to it without having any personal inclination for teaching.

As the numbers of health workers who received their basic training five, 10 or 20 years ago increases, the need for continuing education is constantly growing. In view of both the rapid changes and development in medical science and the relative isolation of many health workers who have little supervision, few colleagues to have discussions with, and an almost total absence of suitable reading material, there is a great need for refresher courses. Up till now most training schools have been so concerned with basic training programmes that little has been done for continuing education.

The health professions have realised, only very slowly, the special tasks of teachers, and begun to select and train people and to provide some sort of career structure. In this respect the nursing profession has been a notable exception. For many years a special training nurse tutor has been required for the staff at nursing schools.

DEVELOPMENT OF TEACHER TRAINING

Educational science has undergone rapid development at the same time as medical science. A WHO Study Group on teacher training summarised the situation in 1973 as:

(1) There is a body of knowledge which is justifiably described as educational science.
(2) It follows logically that health professions educators should be familiar with that science and skilled in its application.
(3) Since that science gives promise of increasing both educational efficiency and educational effectiveness, as well as economising in the use of scarce resources (particularly teacher time and student time), it is worthy of systematic application.
(4) There is widespread evidence of serious deficiencies in present educational practices, some of which can be corrected by training teachers in the sound application of educational principles.
(5) The growing interest of faculties of medicine and of other health professions in such training strongly suggests that individual teachers and administrators find the results personally satisfying or professionally rewarding.

(6) The increasing array of practitioners, auxiliaries and students who participate in the instruction of students in the health professions make some kind of training programme essential.

Levels of teaching

When the concept of a skill pyramid is understood and the critical importance of continuing education for all health workers is accepted, it follows that all senior health workers should communicate their knowledge and skill to others as part of their regular work. If this is to be achieved, an introduction to the methods of teaching should be an integral part of the training of all middle or upper level health workers. However, instruction and practice in teaching methods have conspicuously absent from the basic curriculum of most health professionals. Teaching and management are among the most important activities of health workers in developing countries and there is an urgent need to provide health personnel with the knowledge and skills required to undertake these functions more efficiently.

The health worker who is going to be a full- or nearly full-time teacher needs further training over and above what should be (though at the moment it is not) commonly taught in all medical curricula. There is of course no limit to the time that may be spent learning and researching in this field. And like most specialists, those in educational science are liable to over-extend the theoretical aspects of their subject and surround them in jargon, making them difficult for an ordinary teacher of health workers to understand and apply. However, a valuable addition to the competence of a teacher who knows his subject matter, can be made in a one-month training period. If some revision or extension of background knowledge of subject matter is also required, a period of three months is desirable.

For those who intend to make a career in medical education, further study or training is desirable. For those who may become principals of multi-disciplinary schools, educational planners or policy makers, or wish to undertake educational research, courses of one or two years may be required. This, however, should not overshadow the point that for the majority of health workers who are going to be teachers only for a part of their career, much can be achieved in a short time.

The need for training is clearly shown in a report in 1973 prepared by the Commonwealth Health Secretariat on the training of teachers for medical health personnel. This showed that in the English-speaking countries of East, Central and Southern Africa in 1973, there were 571 teachers in health worker schools. Only 394 of these were nationals of the countries in which the schools existed.

Table 37.1 shows how many of these have received any training in educational methods. It can be seen

Table 37.1 *Numbers of national tutors with training out of a total of 394*

Country	Dental care and technology	Environmental health	Laboratory technology	Medical assistants	Nursing	Occupational therapy	Orthopaedic technology	Pharmaceutical assistants	Physiotherapy	Radiography
Botswana					4					
Kenya				2	25				1	2
Lesotho					15					
Malawi					5					
Mauritius					4					
Swaziland					3					
Tanzania					29					
Uganda			1	2	26					2
Zambia			1		3					
Total	0	0	2	4	114	0	0	0	1	4

that with the exception of the field of nursing, very few teachers had been trained.

The content of training courses

Over and above a competence in the subjects to be taught, all teachers should at the appropriate level be capable of:

Educational planning

At the simplest level this involves the planning of individual sessions and courses. Senior teachers will also be concerned with curriculum development for one or more programmes. It is important that the teachers should learn to select and define instructional objectives. These should be consistent with the student's future roles and in line with the school's policy. Probably the commonest error made by untrained teachers is to try to pass on all they know, however irrelevant it is to the students' needs. Learning how to select material, and to involve students in understanding why it is required can rapidly improve a teacher's competence.

Teaching methods

For most of today's teachers, lectures were the commonest way in which subjects were presented to them. It is now recognised that there are many other, and often more effective, ways of learning. A teacher-training course should expose participants to the theory and practice of other methods – group discussion, individual study, practical work and role-playing.

The importance of books and other learning material should also be emphasised. Some of the failure of educational experts to influence teachers to change their methods of instruction are rooted in the shortage of appropriate books and practical learning (ations prevailing in many schools. It is no good t ng to arrange private study unless the resources fo it are available. The practical problems of selecting books, duplicating notes and arranging practical sessions need careful consideration.

The teachers also need guidance and experience in using whatever equipment is likely to be available; blackboards, overhead projector or slide projector. For senior teachers, more sophisticated equipment may be available and additional time will have to be spent in acquiring competence in using it.

Evaluation

Many teachers will themselves have qualified by a final written examination consisting of essay-type questions and possibly an oral test. They may not know there are other ways and purposes of evaluating a student's progress. The advantages of a system of continuous assessment with due emphasis on the acquisition of the required practical skills need to be explained. The preparation of appropriate questions for written tests also needs practice. It is not possible in short courses to make all participants capable of writing their own multiple-choice questions, but the more objective short-answer questions are a reasonable alternative and considerably better than either essay-type questions or bad multiple-choice questions.

CONCLUSION

There is no question of the value of long training courses so that teachers can cover the above topics in depth, and extend and up-date their knowledge of the subjects taught. However, if one looks epidemiologically at the problem of training teachers, the priorities lie elsewhere. Students who attend courses where none of their teachers has any training in education are unlikely to reach their full potential. Hence the need for courses short enough for all teachers to attend is overwhelming.

Short courses run on the principle of the educational journey without jargon, can in a short time reorientate teachers towards more effective teaching (McMahon, R. J., personal communication).

The educational journey has three steps:

(1)	Where are we going?	– objectives.
(2)	How do we get there?	– teaching methods and materials.
(3)	How do we know that we've arrived?	– evaluation.

Some people are born good teachers and do reasonably well without any training. Others may lack the most basic requirement of even an interest in student learning and are unlikely to become good even with extensive training. However, the large majority of teachers of health workers lie between these extremes, and if most could be exposed to such courses before they start any teaching assignment, the quality of training of health workers would be greatly improved.

The need for continuing education is at least as great for teachers as for all other health workers. It is essential that they should have opportunities for updating their knowledge and skills both in the subjects they are teaching and in the methods by which they may be presented. The knowledge gained by practical experience is more useful if it can be shared, discussed

and consolidated with others. Short refresher courses or seminars can do a great deal to maintain the interest and develop the competence of teachers, when held not less than once every two years, and preferably on an annual basis.

In view of the central role that health workers with one, two or three years' training play in the provision of medical care for the majority of the world's population, the training of their teachers deserves a higher priority than it usually receives.

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