TECHNICAL DISCUSSIONS

The Education and Training of Medical and Public Health Personnel

LETTER, QUESTIONNAIRE AND DOCUMENT ON "TRAINING AND UTILIZATION OF AUXILIARY PERSONNEL IN MEDICAL AND HEALTH SERVICES" SENT TO MEMBER GOVERNMENTS ON 18 AUGUST 1952
Sir,

Following the first session of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel in 1950 and the Technical Discussions on the Education and Training of Medical and Public Health Personnel, which took place at the Fourth World Health Assembly, our Headquarters in Geneva extended its activities to study the need, utilization and training of auxiliary personnel.

It first attempted to arrange for the compilation of a dictionary of nomenclature that would give a simple description of each kind of appointment in the health services in order that some reasonable comparison could be made. Questionnaires were prepared at Headquarters and a trial distribution was made in the Eastern Mediterranean Region.

A preliminary analysis of the replies revealed that they contained extremely valuable information and it is now felt that it would be of great help to obtain similar information from the other regions. Assurance has been gained that, from the study of the functions, terminology, qualifications, training and educational requirements of the many categories of auxiliaries, it will be possible to present a schedule of standards applicable to the various groups now employed in most countries.

Therefore, I would appreciate your cooperation very much if you would please fill out the attached questionnaires and return them to me at your earliest convenience. I hope that in the Western Pacific Region the questionnaires can be collected soon enough to be used in the technical discussions that will take place at our Regional Committee meeting next month in Saigon. For your information, I am attaching also a document on the training and utilization of auxiliary personnel in medical and health services.

I have the honour to be,

Sir,

Your obedient servant,

I. C. Fang, M.D.
Regional Director

ENCLS: as stated.
The World Health Organization Expert Committee on the Professional and Technical Education of Medical and Auxiliary Personnel, at its First Session in February 1950, adopted a "tentative outline for a long-term programme in professional and technical education". One of the general aims of the programme was "increase in understanding of the public-health and social responsibilities in training of medical and auxiliary personnel".1

The "training and utilization of auxiliary personnel in medical and health services" was one of the subjects chosen for informal technical discussion at the Fourth World Health Assembly.

The term "auxiliary personnel" has been used to designate various categories of persons. These categories, although differing widely from each other, fall into two broad groups.

The first group consists of workers whose functions are complementary to those of the doctor, and whose training is qualitatively different from that of the doctor. It includes almoners, chiropodists, dietitians, health educators, laboratory technicians, nurses, occupational therapists, pharmacists, physiotherapists, remedial gymnasts, speech therapists, and the like. These categories constitute "professions" in their own right, and persons who have obtained the official qualification required to exercise such professions enjoy full professional status analogous to that of the doctor. For this group (which was recently very fully discussed in the United Kingdom by a commission presided over by Mr. Zachary Cope),2 the term "ancillary medical personnel" might perhaps be more suitable than "auxiliary".

The second group consists of workers in certain fields of medicine and public health (such as medicine, nursing, sanitation, etc.) who have not undergone the training required to qualify for full professional status in these fields, but who have received enough training to enable them to assist, or to perform some of the functions of, persons who have full professional status.

A fully qualified nurse, for example, belongs to the first group, while a partially trained nurse, who would be capable of assisting a fully trained nurse, or who could, in areas where there are not enough fully trained nurses, carry out some of the duties normally performed by fully trained nurses, belongs to the second group.

The World Health Assembly Discussion Group decided that only "auxiliaries" of the second group fell within the scope of their investigation, and it was further decided to focus attention on the following seven categories which, for practical purposes, include all "auxiliaries" falling within this group:

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(1) those who perform some of the functions of registered doctors;
(2) those who act as nursing assistants;
(3) those who perform functions in connexion with midwifery;
(4) those who act as assistants to or in place of sanitary engineers;
(5) those who act as assistants to or in place of registered dentists;
(6) those who assist or function in some respects in place of fully qualified medical laboratory technicians;
(7) special categories of auxiliaries recruited and trained for specific purposes, such as vaccination against smallpox, anti-malarial duties, bilharzia control, anti-trypanosomiasis work, and the control of various other diseases.

Auxiliaries who perform some of the functions of registered doctors

These are variously known in different countries as "Medical Assistants", "Health Officers", "Dressers", "African Physicians", "Native Medical Practitioners", "Feldshers", "Sanitarians", etc. They are usually assigned to work in rural areas or other districts where there are not enough doctors, to do routine duties in clinics and hospitals, and to supervise the general hygiene of the community. They are taught to recognize and treat common diseases and to carry out epidemic control measures.

An interesting illustration of the development of the teaching of auxiliaries able to perform some of the functions of registered doctors is offered by the history of the Central Medical School for Native Medical Practitioners at Fiji.

Towards the end of the last century Indian immigration to Fiji made necessary large-scale vaccination against smallpox of the indigenous Fijian population, and there were not enough fully qualified doctors to do this. A number of Fijian youths were therefore trained to carry out vaccinations and simple quarantine measures. The idea was later carried further by giving suitable young men a three-years' hospital training, at the end of which they received a Native Medical Practitioner's Certificate. This system, begun in 1886, produced practitioners who gave very useful service to the community, especially in rural areas - so much so that in 1929 it was extended, as the Suva Central Medical School, to include students from Tonga, the Gilbert and Ellice Islands, the British Solomon Islands, Western Samoa, the Cook Islands, and the New Hebrides. In 1931, by which time the School had some forty students of eight different races, the course was extended from three to four years. In 1935 Nauru and Eastern Samoa (USA) joined in.

Additional accommodation has lately been made available at the School, and nearly 100 students are now in residence. This includes students in dentistry and in pharmacy, and one or two under the Health Department. More and more emphasis is being laid on training in preventive medicine.

It is interesting to note that up to the present time the School has not found it advisable to insist upon a common standard of general education before training is begun. This is because of the wide range in the educational standard of the peoples from whom the students are drawn. An entrance test at the educational level of Polynesian students would tend to exclude Micronesians and Melanesians.

In the Philippines it has been thought that many of the routine duties which take up much of the time of qualified doctors (especially health officers) could be carried out by well-trained "para-medical" staff. A special course, leading to the degree of Bachelor of Science in Hygiene", has therefore been prepared, whose chief objective is to turn out well-trained "para-medical" staff (public health laboratory workers, sanitarians, etc.). The course is for four years' duration. Subjects taught during the first two years include chemistry, physics, biology, languages, mathematics, and general subjects such as philosophy
and psychology. The second two-year period is devoted to anatomy and physiology, pathology and bacteriology, nutrition, clinical laboratory methods and public health practice and administration.

In Cambodia, a special "Health Officers!" College has been created at Pnom-Penh. It gives a four-year course with clinical and pre-clinical subjects taught together, and practical "social hygiene" work (including malaria control work) at the Municipal Health Office in Pnom-Penh.

The training of this category of auxiliary varies considerably in different countries. The basic educational requirement varies from the sixth grade of elementary school to nine or twelve years of high school, and the period of technical training from six months to three years.

Auxiliaries who act as nursing assistants

Because of the world shortage of nurses, more attention has been given to auxiliaries in nursing than in any other field of medicine and public health.

The nursing care of the sick involves a multitude of duties, ranging from simple tasks of a domestic nature to techniques calling for a high degree of scientific knowledge. The need for a type of personnel who could be trained more quickly and in larger numbers than fully-trained nurses, and whose employment would free the latter for the higher-grade duties for which they alone, with their advanced training, are competent, has long been apparent. In the more highly developed countries, such as the United States of America, Great Britain and Sweden, nursing auxiliaries have come to occupy a permanent place in the nursing services, more especially as assistants to fully qualified nurses in hospitals. In the less highly developed countries their chief field of service has been in rural areas, where their employment, under the supervision of the few fully qualified nurses available, has enabled the major needs of large population groups to be adequately met.

Auxiliary nurses, like auxiliary doctors, exist under many different names, e.g. "Nursing Aides", "Nursing Attendant", "Junior Medical Nurse", "Nursing Assistant", and various attempts have been made to classify them.

The First Report of the Expert Committee on Nursing of the World Health Organization defined the term "auxiliary nursing personnel" as those who give less exacting care, which supplements that given by nurses, or those whose duties are confined to some particular phase of the health programme (e.g. vaccinators).

Among the recommendations of the Committee, we find the following:

Such personnel should receive adequate training and perform their functions under the supervision of nurses.

The scope of the training of these workers should be based on the needs of each country and the functions they are to perform in normal and in emergency times.

Nurses should be largely responsible for the development of training programmes for auxiliary nursing personnel, whether these training programmes are carried on in hospitals, by other health agencies, or in the general education system of the country (for example, vocational schools).

The Committee recommends that, whenever possible, suitable nursing auxiliaries be encouraged to complete their general education with a view of entering schools of nursing.
In view of the large numbers of untrained personnel performing nursing duties throughout the world, the committee recommends that special attention be given to in-service training, by nurses, for this group.

In Australia, one state, Tasmania, has established an auxiliary nursing service. The scheme was begun in 1949, to help to overcome the serious shortage of nurses. Training is for one year, and the course, which is conducted by hospitals, covers the theory and practice of nursing, first aid with elementary anatomy, invalid cookery, elementary dietetics and elementary hygiene. Registration as an auxiliary nurse is effected by the Department of Public Health, Hobart. Where the educational standard is adequate, it is hoped that the auxiliary nurses will complete the further three years' course required to become general nurses.

In Indonesia, this type of auxiliary personnel is differentiated into "Junior" and "Senior" medical nurses.

Auxiliaries who perform functions in connexion with midwifery

This category includes auxiliaries variously known as "Maternity Assistants", "Rural Midwives", "Granny Midwives" (China), "Dais" (India), "Bidans" (Malaya), etc. They range from auxiliary midwives who have been given a careful basic training (as in, for example, the French African territories), to the Indian "dais" who "inherit" the profession, who are often illiterate, and who have received no scientific training at all. In the trained group the general education required before beginning training varies in different countries from a few years of elementary schooling to a high school education, and the duration of the training itself varies from one to three years. As for the untrained native midwives, attempts are made in some countries to teach them the rudiments of modern aseptic methods by bringing them in for short periods of training at district centres. In the experimental training centre for auxiliary health workers set up by UNICEF in North China in 1948, and to which further reference will be made below, the training of local "granny midwives" was an important subsidiary feature. Short courses of three hours per day for four days were held at one centre, and to another local governments sent women, accompanied with grain for their board, to undergo a week's training as resident "students".

Auxiliaries who act as assistants to or in place of sanitary engineers

This important group of auxiliaries includes workers variously known as "Sanitary Inspectors", "Health Inspectors", "Rural Hygiene Demonstrators", "Health Agents", "Public Hygiene Inspectors" and "Housing Inspectors". They should not be confused with the officials also known in certain countries (e.g. the United Kingdom) as "Sanitary Inspectors".

The standard of elementary education required before admission to training varies in different countries from six to nine years, and the length of the training itself from six months to three years.

Auxiliaries who act as assistants to or in place of registered dentists

The best known example of auxiliary workers in dentistry is that of the New Zealand School for Dental Nurses. They are young women of School Certificate Standard, who, because of the high incidence of dental caries and the small number of dentists in relation to the population, have been trained to care for the dental

health of school children. They receive two years' theoretical and practical training, divided into four periods of six months each, with an examination at the end of each period. They work in school dental clinics, and do fillings, extractions and cleaning, and carry out dental health education and prophylaxis, of preschool and school children up to the age of twelve. If they find that a child requires treatment outside their competence, they refer him to a fully qualified dentist. They are employed by and are under the supervision of the Department of Health. Each Dental Nurse is visited at least twice yearly by a Principal Dental Officer, for inspection of her clinical work, and by a Dental Nurse Inspector, who supervises organization and administration.  

A similar school exists at Penang, Malaya.

This is a type of auxiliary worker to which more attention might well be given in some countries, in which, if dental treatment and prophylaxis are to be carried out only by the few qualified dentists available, there is no likelihood of even a substantial majority of the population receiving the dental care they need.

Auxiliaries who assist or function in some respects in place of fully qualified medical laboratory technicians

Not many examples of this type of auxiliary have been brought to notice. They are sometimes called "Laboratory Technicians", sometimes "Laboratory Assistants", sometimes "Microscopists". Their function is to relieve the qualified laboratory technician of work for which a high degree of training or scientific knowledge is not needed. They can do routine urine-testing, blood counts, etc., and recognize common parasites in blood or stool specimens.

Special categories of auxiliaries recruited and trained for specific purposes

These include auxiliaries trained for specific tasks such as vaccination against smallpox, or who assist in work for the control of malaria, bilharziasis, trypanosomiasis, and other endemic diseases to meet other local health needs. Not infrequently they are recruited from auxiliaries who have already been trained to act as assistants to or in place of sanitary engineers. Their training is, of course, adapted to the particular task they are to carry out, and on this its length and content will depend.

In Australia, auxiliaries of this type are trained for work in tropical areas at the School of Public Health and Tropical Medicine of Sydney University. The course lasts for three months, and consists of lectures in elementary tropical medicine, hygiene and sanitation.

An important experiment in the training of auxiliary personnel (known as "People's Health Workers") was inaugurated by UNICEF (in collaboration with the Chinese Liberated Areas Relief Administration) in North China in 1948.

Training and Selection:

The kind of training to be given to auxiliaries, its duration and content, will clearly vary from country to country, and will be decided upon with no great difficulty by the administrations concerned. It depends upon a number of factors which can be relatively easily ascertained, such as the quality of personnel available for training, the nature of the work to be done, the cultural pattern of the population groups whom the auxiliaries are to serve, etc.


A more difficult question, however, is that of the standard of general education to be required before individuals are accepted for training as auxiliaries. This deserves very careful consideration by administrations which are thinking of beginning this kind of training. Insistence on too high or too rigid an entrance standard might exclude persons capable of giving useful and satisfactory service. On the other hand, it is perhaps undesirable that intelligent individuals should embark on a career as auxiliaries without having received the basic general education which would enable them later, if they have shown ability, and if the necessary facilities have by that time become available, to proceed to full qualification in their particular branch of health work. A satisfactory solution of this problem is especially important in the case of auxiliary doctors and nurses. There is a danger that too great concentration on finding a short-term remedy for the shortage of fully trained workers might have the result of prolonging the shortage, by diverting into a cul-de-sac large numbers of candidates who would have been suitable for full training.

The prospects and interests of the auxiliaries themselves must also be kept in mind. It would clearly be difficult for an administration to inform a man, who has worked satisfactorily for, perhaps, ten or fifteen years as an auxiliary, but who has not received sufficient general education to enable him to pursue the studies required to attain full professional status, that his services are no longer needed because fully qualified persons have become available.

In a few cases the difficulty may be met by provision of facilities for adult education, of which intelligent auxiliaries might take advantage concomitantly with their work, but for auxiliaries working in remote areas in underdeveloped countries this is not practicable. Perhaps the best solution would be arrangement for periodic "step-by-step" training. After a period of practical work of a kind for which they had been prepared in their initial course, promising auxiliaries could be recalled to a centre for further instruction, which would include both general educational and technical subjects. This could be repeated in several stages, practical work always being kept at the level for which the auxiliary has been trained. Only those found capable of benefiting by higher training would be allowed to proceed to the next stage.

The problem of the basic general education to be required of auxiliaries presents itself in different ways in different countries and in different circumstances. We have seen that in some countries auxiliary nurses have come to occupy a well-defined and permanent place in the cadre of the health services. Here a solution must be found which will prevent potentially good material from being lost to the higher grades of the profession, and in such cases it would seem that a fairly high standard of general education should be insisted upon at the beginning of training. In other cases the provision of auxiliary personnel is of the nature of a short-term expedient, designed to fill a gap, which it is hoped will be a temporary one, caused by shortage of fully-trained personnel. Here the standard of general education required for the auxiliaries will have to depend largely on local circumstances, of which the most important may be the urgency of having large numbers of them available as soon as possible. If a low initial educational standard is accepted, then some provision should be made to enable the more capable and intelligent ones to acquire the general education which would enable them to take advantage of facilities for full training, as and when these become available in the country.

Another aspect of the training of auxiliaries which may present difficulty is that of provision of training facilities, and especially the provision of teachers for the initial courses. Teachers should preferably be drawn from the inhabitants of the country, but it may be necessary for the first batch of teachers to be trained in another country (preferably one in which conditions, climatic, economic and cultural, are not too different from those at home), which already has experience in training the same type of auxiliaries. It is
perhaps here that the World Health Organization could give most effective help, by advice, fellowships, arrangement of regional training courses, etc.

In this connexion, the following opinion, expressed by the World Health Organization's Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel, is of interest:

"The Committee further recognized that in many countries it is still imperative that use be made of semi-trained workers and that these, when properly supervised, may make an invaluable contribution to public health. The Committee felt that use of such workers should be encouraged as a stepping-stone toward development of more adequately trained personnel, and that provision should be made for training of such sub-professional workers.

In considering the training of auxiliary workers, however, the Committee was impressed by one obvious need in any community - that facilities for the instruction of trained staff, particularly teachers and administrators should be established before approaching the question of auxiliary workers. If this were not done, it would be impossible to retain reasonable standards of competence or to ensure the proper supervision of auxiliary staff." ¹

TRAINING AND UTILIZATION OF AUXILIARY PERSONNEL IN MEDICAL AND HEALTH SERVICES

QUESTIONNAIRE I

Auxiliaries to doctors

1. What is the total number of fully trained doctors per 1,000 inhabitants in your country?

2. Is this number considered adequate:
   (a) for the country as a whole?
   (b) for special areas (e.g. rural, remote, urban)?

   (If answers to (2) are "Yes", the succeeding questions need not be answered).

3. Has an attempt been made to meet the inadequacy by training auxiliaries?

4. If answer to (3) is "Yes":
   (a) What is the total number of such auxiliaries now in service?
   (b) How many are trained annually?
   (c) Describe the training given at present, under the following headings:
      (i) standard of general education required before admission to training course;
      (ii) length of training course;
      (iii) content of training course;
      (iv) description of the duties which the trained auxiliaries are allowed to perform;
      (v) method of supervision;
      (vi) administration: full-time or part-time salaried servants of the state? or of state-sponsored institutions? or of private institutions? salary? allowed to practise on their own, either full-time or part-time?
      (vii) availability in the country of a sufficient number of persons suitable for and likely to benefit from such training;
      (viii) availability of a sufficient number of teachers to provide the training;
      (ix) availability of training facilities (including teaching equipment and opportunities for gaining practical experience under supervision);
      (x) help given by WHO or other international organizations in the training of auxiliaries,
(d) Do you advocate changes in the training or organisation of such auxiliaries? If so, describe the changes you advise under the following headings:

(i) standard of general education before admission to training course;
(ii) length of training course;
(iii) content of training course;
(iv) duties which trained auxiliaries are allowed to perform;
(v) method of supervision;
(vi) administration and salary;
(vii) modification of the country's general educational system, to make available larger numbers of persons suitable for and likely to benefit from such training;
(viii) training of the teachers who train the auxiliaries;
(ix) modification or improvement of training facilities;
(x) ways in which WHO or other international organizations might help in bringing about such changes.

(a) Do you advocate increasing the number of such auxiliaries trained annually? If so, to how many?

5. If answer to (3) is "No":

(a) Do you advocate that a scheme for training auxiliaries be begun in the near future?
(b) If answer to 5(a) is "No", state reasons.
(c) If answer to 5(a) is "Yes", describe, under the headings listed in 4(c) above, the type of training you think would be suitable.

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QUESTIONNAIRE II

Auxiliaries to Nurses

1. What is the total number of fully trained nurses per 1,000 inhabitants in your country?

2. - 5 as in Questionnaire I.
QUESTIONNAIRE III
Auxiliaries to Midwives

1. What is the total number of fully trained midwives per 1,000 inhabitants in your country?

2. - 5. as in Questionnaire I.

QUESTIONNAIRE IV
Auxiliaries to Sanitary Engineers

1. What is the total number of fully trained sanitary engineers per 1,000 inhabitants in your country?

2. - 5. as in Questionnaire I.

QUESTIONNAIRE V
Auxiliaries to Dentists

1. What is the total number of fully trained dentists per 1,000 inhabitants in your country?

2. - 5. as in Questionnaire I.

QUESTIONNAIRE VI
Auxiliaries to medical laboratory technicians

1. What is the total number of fully trained medical laboratory technicians per 1,000 inhabitants in your country?

2. - 5. as in Questionnaire I.
QUESTIONNAIRE VII

Auxiliaries trained for specific purposes

1. What special categories of auxiliaries are recruited and trained in your country for specific purposes? (such as to perform vaccination against smallpox, or to assist in the control of malaria, bilharziasis, trypanosomiasis, or other endemic diseases, or to meet any other local health needs).

2. For each category:
   (a) What is the total number of such auxiliaries now in service?
   (b) How many are trained annually?
   (c) Describe the training given at present, under the following headings:
      (i) standard of general education required before admission to training course;
      (ii) length of training course;
      (iii) content of training course;
      (iv) description of the duties which the trained auxiliaries are allowed to perform;
      (v) method of supervision;
      (vi) administration: full-time or part-time salaried servants of the state? or of state-sponsored institutions? or of private institutions? salary? allowed to practise on their own, either full-time or part-time?
      (viii) availability of a sufficient number of teachers to provide the training;
      (ix) availability of training facilities (including teaching equipment and opportunities for gaining practical experience under supervision);
      (x) help given by WHO or other international organizations in the training of auxiliaries.

   (d) Do you advocate changes in the training or organization of such auxiliaries? If so, describe the changes you advise under the following headings:
      (i) standard of general education before admission to training course;
      (ii) length of training course;
      (iii) content of training course;
      (iv) duties which trained auxiliaries are allowed to perform;
(v) method of supervision;
(vi) administration and salary;
(vii) modification or improvement of the country's general educational system, to make available larger numbers of persons suitable for and likely to benefit from such training;
(viii) training of the teachers who train the auxiliaries;
(ix) modification or improvement of training facilities;
(x) ways in which WHO or other international organizations might help in bringing about such changes.

(e) Do you advocate increasing the number of such auxiliaries trained annually? If so, to how many?

3. Are there any specific purposes for which you think that auxiliaries should be trained in your country, and for which none are being trained at present? If so, what are they?

4. For each new category of auxiliary thought necessary under 3 above, describe the type of training you think would be suitable, under the headings listed in 2(c) above.