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WORLD HEALTH ORGANIZATION

TECHNICAL REPORT SERIES

No. 212

THE USE AND TRAINING OF AUXILIARY PERSONNEL IN MEDICINE, NURSING, MIDWIFERY AND SANITATION

Ninth Report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel

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WORLD HEALTH ORGANIZATION

PALAIS DES NATIONS

GENEVA

1961

EXPERT COMMITTEE ON PROFESSIONAL AND TECHNICAL EDUCATION OF MEDICAL AND AUXILIARY PERSONNEL

Geneva, 19-23 September 1960

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PRINTED IN SWITZERLAND

Wld Hlth Org. techn. Rep. Ser., 1961, **212**

THE USE AND TRAINING OF AUXILIARY PERSONNEL IN MEDICINE, NURSING, MIDWIFERY AND SANITATION

Ninth Report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel

INTRODUCTION

The Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel met in Geneva from 19 to 23 September 1960. Dr P. Dorolle, Deputy Director-General, opened the meeting on behalf of the Director-General, welcoming the members, and apprising them of the work of a previous expert committee [1] on the training and utilization of auxiliaries, the subject of the present meeting. The Deputy Director-General pointed out that, in accordance with the relevant terms of reference,[2] the Committee was invited to concentrate, in its deliberations, on the study of four categories of auxiliary workers : medical assistants, auxiliary nurses, auxiliary midwives and auxiliary sanitarians. It was thus expected that a more profound study of these categories would be of assistance to many countries in which the question of auxiliary medical and health personnel was becoming of increasing importance and interest.

Dr Margaret Read was elected Chairman, Dr Galina Y. Volkova, Vice-Chairman, and Dr N. R. E. Fendall, Rapporteur.

During the deliberations of the Committee, it was felt that, in view of the widely differing circumstances of countries with regard to the training and utilization of auxiliaries, it should limit its recommendations to general lines for the composition of syllabi for training courses ; the question of detailed guidance could be more effectively dealt with by appropriate inter-country discussion at the regional level.

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1956, **109**

[2] *Off. Rec. Wld Hlth Org.*, 1958, **89**, 44

1. DEFINITIONS

Since there is no general agreement on the terminology used in designating public health workers, it is necessary to state that for the purpose of this record and for the avoidance of misunderstanding, the following definitions have been adopted :

(1) *A professional worker* is a health worker trained to the generally accepted level for that discipline in a particular country.

But in view of the differing standards prevailing in the various countries, the Committee considered that it should be a continuing objective in training steadily to raise both the educational level of entry and the standard of technical training, so that comparability with standards in the more advanced countries is attained.

Examples of professional workers are :

(*a*) physician, or doctor (but including the whole range of names denoting specialties or branches within the medical profession, such as surgeon) ;

(*b*) nurse, including all branches of the profession of nursing ;

(*c*) midwife ;

(*d*) public health (sanitary) engineer, health inspector or sanitarian.

(2) *An auxiliary worker* is a technical worker in a particular field with less than full professional qualifications. The auxiliary health worker is one who may also be trained to a level of function comparable to that acceptable for professional workers in a particular country or region.[1]

It should be noted that in this report the term " auxiliary " is used to mean a worker who has successfully completed his training ; but whilst undergoing training, he is referred to as an " auxiliary trainee " or " student auxiliary ".

Since the range of auxiliary health workers is too wide for adequate discussion within reasonable limits of time, the decision has been taken to restrict this report to the problems which arise from the utilization and training of auxiliary personnel in medicine, nursing, midwifery and sanita-

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[1] An auxiliary worker has been defined as " a paid worker in a particular technical field with less than full professional qualifications in that field who assists and is supervised by a professional worker " (United Nations, Administrative Committee on Coordination (1954) *Report of the ad hoc inter-agency meeting on the training of auxiliary and community workers*, p. 10 (unpublished document Coordination/R.170). Quoted in : Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel (1956) *Wld Hlth Org. techn. Rep. Ser.*, **109**, 4).

tion. Otherwise expressed, the four categories of auxiliary public health worker here considered are :[1]

(*a*) Those health workers whose duties include the diagnosis of, and the prescribing of standard treatment for, common diseases, and who are therefore auxiliary to the fully qualified physician or doctor. These are referred to herein as *medical assistants*.

(*b*) Those whose duties are largely, or wholly, concerned with aspects of nursing, and who are auxiliary to the fully qualified nurse. These are referred to herein as *assistant nurses*.

(*c*) Those who are auxiliary to a fully qualified midwife. These are referred to herein as *assistant midwives*.

(*d*) Those whose duties entail assistance to public health engineers, health inspectors, sanitarians, or medical officers of health. These are referred to herein as *assistant health inspectors*.

2. THE NEED FOR AUXILIARIES IN RELATION TO PUBLIC HEALTH PROGRAMMES

During the period which has elapsed since the meeting of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel in 1955, which was devoted to considering the training of health auxiliary personnel,[2] the expansion of health services both in developed and in developing countries has laid further emphasis on the need for auxiliary personnel.

In the former countries, advances in knowledge in the medical field, the changing patterns of social structure and behaviour, and the growing demands of a more informed population especially for services relating to geriatrics, long-term illnesses and rehabilitation have increased the need for additional auxiliary cadres. Moreover, the experience of developed countries shows that the need for auxiliary personnel does not diminish with the growth of professional personnel; the contrary is the case, and the demand for auxiliaries may be expected to continue and even to increase.

In many of the developing countries, owing largely to the rate of development, an absolute shortage of fully trained professional personnel is severely handicapping the execution of planned health programmes, particularly since there is often an urgent need to put into effect disease eradication and control programmes, and to expand basic public health services. This

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[1] The term " medical assistant " is widely accepted ; however, in regard to the categories of auxiliary nurses, midwives, and health inspectors, see the opinion of the Committee as expressed in the sixth paragraph of subsection 3.2, page 8.

[2] *Wld Hlth Org. techn. Rep. Ser.*, 1956, **109**

shortage in the medical and paramedical fields has increased the need for auxiliaries to act as substitutes for qualified doctors, nurses, midwives, public health inspectors, and other professional workers, in addition to fulfilling their natural and desirable role as assistants.

Moreover, it is recognized that it is uneconomic to employ highly trained personnel in work which auxiliaries are capable of performing; there is also need for trained persons who can carry out simple technical procedures and the diagnosis and treatment of minor illnesses which do not necessarily require the attention of qualified doctors.

Further reasons for the introduction of auxiliaries are: an insufficiency in the numbers of recruits with the necessary basic education for full professional training; reluctance of fully trained personnel to work in rural areas poor in amenities and comforts; and lack of sufficient funds to provide both for an adequate number of higher paid workers and for the more elaborate training facilities which would be required.

Too rapid expansion of professional training without preservation of high educational standards has its limitations in fulfilling the need for professional cadres and—if pressed beyond a certain limit—has the inherent danger of lowering standards. Such programmes in no way overcome the need for auxiliaries.

In the planning of health development programmes, the need for auxiliary personnel in terms of numbers and categories must be assessed. Before training programmes are established, due consideration should also be given to the numbers of professional personnel needed, since ultimately some numerical relationship must be established between these two groups.

3. USE OF AUXILIARIES

3.1 Administrative aspects

The importance of having available a sufficient number of auxiliaries for the implementation of a health policy must not be allowed to override the need to maintain adequate standards in training and performance.

Proper steps must be taken by health administrations to regulate the training and use of auxiliaries, and for this the appointment of a senior officer as director of education and training of auxiliaries is advisable. This post should preferably—though not essentially—be a full-time one and should be within the pattern of the ministry of health.

The duties of such a director should be, among others:

(1) to advise on auxiliary training;

(2) to approve training schools, especially when they are not operated directly by the administration;

(3) to maintain contact with the officers responsible for the determination of conditions of service ;

(4) to maintain contact with the teachers of auxiliaries in the design and review of curricula ;

(5) to maintain contact with the supervisors in the assessment of the work of auxiliaries and of the extent to which the auxiliaries' training is fitting them for it ;

(6) either in person, or by deputy, to assist in the selection of recruits for training ;

(7) to report to the committee for necessary action in the case where attempts may be made to set up unauthorized schools giving unregulated training and awarding certificates of doubtful value.

At the same time, the director of education and training should not by himself be the dictator of policy. He should be responsible for the synthesis of the views of those who teach and of those who work with the finished product of the training, so that syllabi are continuously adapted to the functions to be performed. This can be best effected by the formation of committees representative of the various agencies and professions concerned to discuss, decide and promulgate policy.

The over-all duties of the director would be to act as secretary to these committees (of which he would be a member) and to act as co-ordinator between the various professional associations and training institutes.

3.2 Status

It should be recognized that the successful use of auxiliaries and the quality of their work depend to a great extent on securing for them a proper status, in relation to the professional groups, within the hierarchy of the health services, and also on the status accorded to them within the community.

With regard to the auxiliaries' position within the health services, it should be recognized that they have a rightful place of their own, and are not merely subordinates of the professional groups. A defined sphere of work and responsibilities is essential to their harmonious working with other groups. And whereas auxiliaries should not be expected to fulfil the functions of professional personnel, their work should be of sufficient scope to allow of a sense of responsibility, of belonging, and to achieve a definite personal standing within the service. Moreover, the auxiliary should feel, through the supervision of his senior officer, that he is being adequately supported and appreciated.

The conditions of service of auxiliaries should be determined and officially promulgated. They should establish rates of pay and allowances,

leave privileges, hours of work, provident fund and pension schemes, and the grading of auxiliaries according to the responsibilities of posts, which may cover both instructional and supervisory duties, with prospects of promotion to higher grades through merit and experience. The morale of the auxiliary will be further strengthened if it is known that he may enter into training for the professional grades, should he attain to the required educational level. It is of importance that the auxiliary health worker in government and industrial employment should be graded according to his technical qualifications and not solely on his general educational level. Administrations should be encouraged to consider these aspects from a total service viewpoint so that equitable conditions as between workers with comparable duties or responsibilities may be achieved, and to strengthen the official recognition of auxiliaries and their circumstances.

Within the community the status of the auxiliary will vary according to whether he is given independent standing and receives recognition as a vital member of the health services.

The need for the auxiliary to act frequently as a substitute for, rather than as assistant to, professional personnel dictates the exercise of careful supervision, in order to achieve a feeling of adequate support for the auxiliary rather than one of discipline. Indeed, it is probable that the most effective use of professional personnel in many situations is through the proper exercise of their supervisory duties towards auxiliaries, rather than through the more direct professional work, and, from this viewpoint, it is advisable to study the ratio of professional personnel to auxiliaries.

Of particular importance to the status of auxiliaries is the question of terminology. The word "assistant" should be avoided whenever possible as it tends to lower the standing of the auxiliary in the eyes of the community.

In certain countries the category of auxiliary health personnel is non-existent, the medium-grade workers being trained and considered as professionals.

3.3 Selection of candidates for training

A prerequisite of the selection of candidates for auxiliary training is an adequate knowledge of the functions which auxiliaries are to be called upon to perform in terms of the needs of the community and of the country. Such functions must also be related to the social customs and restrictions of a community so that training may be oriented to produce a worker imbued with modern knowledge but acceptable to a community with strongly entrenched beliefs and customs. Training availabilities should be given wide publicity, and in order to achieve a flow of candidates of the right calibre and personality, publicity should be directed to young people, through schools and community organizations, so that the appeal of a humanitarian career, as against the more material reward offered by other

forms of livelihood, can be made apparent at an early age. In this respect, early training in first-aid and hygiene by educational authorities and voluntary organizations is valuable in giving the young people an insight into health work, and efforts should be made to attract candidates from all parts of the country.

Admission to training courses should not only depend on scholastic attainment but also, in regard to age and sex, be related to local cultural patterns and restrictions. The requirements of health are usually included in screening processes, but emphasis needs to be placed not only on the absence of disease but on the securing of trainees both mentally and physically robust, capable of withstanding the demands of ardous training and a career of day and night service to the community.

Educational attainments need to be assessed at the lowest standard at which the student can assimilate the technical knowledge and instruction offered to him. It is not advisable to raise the standard of education necessary for auxiliary training to the level where it approximates to that required for entrance to professional courses, but the door should always be open for an auxiliary to enter the professional courses, and for this purpose financial support should be made available. The latter point particularly applies where a person having secondary school education may, after training and a period of practical experience as an auxiliary, be nominated for admission to training for a professional grade.

Where the majority of auxiliaries are expected to enter the rural health services, their value will be increased if they are recruited from such areas, despite possibly lower educational standards.

Attention must also be given to criteria such as initiative, self-reliance, expressed interest and reliability, in view of the auxiliaries' role as substitutes in the remote rural areas. Previous experience is also a valuable asset and may offset a deficiency in some other aspects, such as educational attainments. This asset may be especially useful in the case of persons who without any special training may have had practical experience—for example, as nursing aides or sanitation workers—and for whom a formal course of auxiliary training would increase both their own status and their value to their organizations. Specific aptitude testing and pre-training adaptation courses are practical methods of eliminating unsuitable candidates.

A short probationary period, which may or may not be part of the course of formal instruction, is also of assistance both to the student in confirming his intention to enter the auxiliary service, and to the teacher in assessing the student's aptitude for his training and subsequent career.

In developing countries, a flexible attitude to selection criteria has to be maintained, and the " open door " principle adopted. The importance of an encouraging personal approach must not be forgotten, and allowances must be made for the emotional stress of candidates.

In the selection of candidates for specific purposes, such as for mass campaigns where urgent personnel needs have to be met, problems of later reabsorption make it advisable to choose candidates of sufficient calibre to undertake the required training for other fields or general health work.

3.4 Functions of auxiliaries [1]

The types of auxiliary required will vary from country to country, according to the stages of development of the health services, and also with the particular problems of the country.

For most routine services situations auxiliaries can be trained to provide a number of skills, and such multi-purpose functioning is desirable. However, in large-scale communicable disease control and eradication programmes immediate needs require the training of single-purpose workers. These have mainly been employed in short-term campaigns against malaria, trachoma, treponematoses, etc.

Such a variation in the needs of the country for both multi-purpose and single-purpose workers stresses the need to keep a careful balance in training programmes, and before such training programmes are initiated a careful survey to determine the relevant priorities and a detailed analysis of the type of work to be performed by each category are necessary.

In general, the needs of many countries can be met by preparing multi-purpose auxiliaries for service with the three broad groups of professional workers in curative medicine, in nursing and midwifery, and in environmental sanitation, together with specific single-purpose workers as indicated by local requirements.

Single-purpose training has to be recognized as temporary even though the auxiliaries so trained may serve for several years. Wherever circumstances permit, preliminary general health training should therefore be given. Such training will equip workers for ultimate use in a variety of field service roles, with only short orientation training courses. By this means, also, the difficult problem of rehabilitation of such single-purpose workers is avoided, and their absorption in the general services facilitated.

Experience has indicated that in planning the development of health services, it should be part of the preparation to estimate the numbers, categories, and functions of staff required to carry out such projects and to train them to this end. Auxiliaries must be trained not only to work within national and local health service programmes, but also to meet the health needs of other agencies.

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[1] The Committee excluded the question of private practice by auxiliaries from the scope of its discussions.

In the performance of their work, auxiliaries must be trained to relate their concepts of modern medical practice, both curative and preventive, to the social and cultural patterns of the local community, so that a high degree of acceptability and rapport is established between workers and community. They should be aware of the sociological structure of the community and of its effect on their work. In the care of the sick the treatment of the disease should not be allowed to overshadow the related human problems of the patient.

They should have a knowledge of how to approach and how to receive the co-operation of the community in improvement of matters such as personal and environmental hygiene, sanitation, and nutrition. Such an outlook means that every health worker should in fact be a health educationist, since health education makes its greatest impact when it accompanies the actual giving of a service.

It should also be borne in mind that health auxiliaries are expected by the community to cope with emergency situations, distinctions of functions as between categories of auxiliaries being somewhat unclear to communities. It is therefore essential that all auxiliaries number among their functions the giving of first-aid and emergency medical treatment, and that they should be willing to assist in all activities related to the general health and welfare of the community.

Among specific fields of work for auxiliaries, in many advanced countries the question of caring for the aged and the rehabilitation and restoration of the injured and the chronically sick are assuming greater importance. But while the best work that an auxiliary can give is naturally in the field in which he has had training, it is not uncommon for auxiliaries to be continuously employed in tasks which do not utilize them to the best advantage. This should be avoided whenever possible.

In the case of medical assistants whose training has embodied both curative and preventive medicine, their placement in rural health work almost invariably forces them into full-time curative dispensary practice to the relegation of preventive medicine and the practice of public health unless adequate arrangements are made to obviate this.

4. TRAINING OF AUXILIARIES

4.1 Types of training

The process of training may be divided into several types, which were considered and defined by the WHO Regional Conference on Auxiliary Nursing, South-East Asia, held in New Delhi during 1958. These definitions were considered and adopted by the Committee as relevant to the training of *all* auxiliaries.

" 'Training is a planned formal or informal learning—a doing process in which a person can be better prepared for carrying out certain functions;

'Basic training' is a planned training programme including theory and supervised practice which is given before the trainee commences work in general or special nursing services; it is equivalent to 'pre-employment' training;

'Post-basic training' is a planned training programme given after basic training and before the trainee commences work in a particular kind of service, tuberculosis hospital or mental hospital;

'In-service training' is a planned formal training programme which is given after the trainee has completed basic training and during her period of employment;

'On-the-job training' is planned informal learning—a doing process commenced and continued during the period of employment; it is not preceded by basic training." [1]

In all these types of training, an essential to success is the integration of theory and practice. It is recognized that the proportion of theory to practice will vary with the amount of basic education on entry, but this does not affect the principle of integration.

Minimal educational requirements will to a large extent be determined by local standards in educational matters, and entry standards will be set not only by the technical content of training, but also by the flow of available recruits. According to the level of educated students available, training programmes will require to be so designed as to enable the best possible use of existing knowledge to be made, and this will often imply the inclusion in technical training programmes of basic education subjects, such as science, mathematics and biology. The extent to which such subjects, and other subjects of common interest to auxiliaries, can be taught in combined schooling has to be decided in the light of local facilities and practical difficulties.

The need to inculcate the team concept implies that certain parts of the instruction of auxiliaries will have a common content. Whilst the simultaneous teaching of trainees representing extremes in levels of basic education would be impracticable, roughly comparable groups could receive common training in basic principles. This is especially applicable to practical training wherein ingenuity, intelligence and initiative are to the fore, and is especially appropriate at the end of training courses. Whatever scheme of training is chosen, it is advisable that for each syllabus a logical sequence of learning be adopted—first the presentation of the facts, then the demonstration of their implication, and finally the opportunity to apply in practice what has been learned. Such an integration of theory and practice throughout training courses implies facilities for theoretical instruction, practical demonstrations and field activities.

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[1] *Report on the World Health Organization Conference on Auxiliary Nursing, New Delhi, 3-15 November 1958* (Unpublished document SEA/Nurs/34 issued by the WHO Regional Office for South East Asia, p. 15)

Teaching should be kept continuously under review so that field practice and tuition are harmonized, old techniques abandoned, and new techniques adopted, and constant efforts should be made to ascertain that the techniques taught are capable of being applied in the field by the auxiliaries.

4.2 Methods of teaching

Whatever detail is accepted in a teaching syllabus the need for a logical programme in imparting knowledge to students and in the assimilation of knowledge and acquisition of skills should be kept in mind. The aim of the teaching should not be the acquisition of learning by rote, but the development of a critical approach, which enables the student to weigh and assess the significance of what he learns and sees.

The student's mind can best be stimulated if traditional didactic lectures are minimized and more emphasis is given to group instruction, bedside teaching, clinic demonstration, group work, and role playing. Thus, trainees will not only acquire knowledge, but also gain a comprehension of the implications of such knowledge and its relevance, through active participation in the learning process. Whenever external lecturers give the teaching, it is recommended that their courses also be attended by full-time staff of the auxiliaries' school and re-discussed in the form of tutorials. Apart from these methods, visits to selected field centres illustrating particular features in the curriculum are helpful if preceded and accompanied by discussions explaining the purpose of such visits and directing the students' attention to specific points. Such more modern methods of teaching emphasize the individual approach to the student taking cognizance of his personal aptitudes and defects.

One purpose of auxiliary training is to develop the personality of the student, giving him confidence with which to approach the public in his daily work, and in turn to obtain their confidence in him. A student should be given regular practice in leadership among his fellows. Again, to enable him to cope with technical problems with similar confidence, there should be no lack of repetition in teaching the more common procedures in his special field. To develop the team spirit and to acquaint students with the capacities and limitations of the categories with which they are to work, combined tasks and exercises are recommended.

Teachers must also appreciate that part of the duties of auxiliaries is the instruction of communities in better health practices, and therefore they should employ all the techniques and audio-visual aids of health education, so that the auxiliary will be thoroughly versed in these techniques on qualification.

Participation in social evenings and extra-curricular leisure activities will foster student-teacher relationships.

While the principle of vacations it to provide both teaching staffs and students with rest and recreation, these objectives can often be attained by changes of occupation and scene. It is therefore believed that attendance by students at such activities as community development conferences and seminars and at rural training camps during vacation periods should be encouraged and supported. Where such activities are well run and the time is fully occupied, they are invariably both enjoyed and appreciated by students as a means of widening their outlook and enabling them to make fresh contacts among others working in similar fields.

4.3 Content of courses

One of the determining elements in planning the content of training courses is the range of different educational levels at which auxiliary workers are recruited. These may vary from the high school educated medical assistant to the almost illiterate worker. The levels of education are, however, rising everywhere and, as is clear from the previous sections, the scope of the work of auxiliaries is also changing.

Certain principles seem to have emerged from the experience of members of the Committee which it may be useful to summarize, since they should influence and perhaps direct the drawing up of curricula in training centres. It was recognized that it was not useful to prescribe or to suggest any sample or model curricula, but it was thought that the following principles might assist those planning the training of auxiliaries.

(1) In all training programmes there should be close integration between the teaching of theoretical subjects, such as physiology, and the practical application of the skills learned by the auxiliaries.

(2) The content of the course should be related to the objectives of the health programmes. In developing these objectives those in charge of teaching auxiliaries should be able to confer with the authorities and organizations which will employ the auxiliaries after training.

(3) The varying educational levels of different categories of auxiliary at the time of recruitment will involve the adjustment of the curriculum, especially in the more theoretical subjects. Whereas formerly the level of education for a particular category may have been very low, the changing patterns of development in the country may make it possible to recruit more highly educated persons. This advance may make it necessary to change the emphasis in the curriculum and to develop critical faculties as well as the learning of new knowledge.

(4) Experience has shown that it is of value to the trainees, and also to the country, to include in the curriculum of auxiliary training centres certain subjects of general educational value. This will make the auxiliary

workers capable of wider service to the country and enable them to look forward to further training and promotion.

(5) The importance of team-work, between auxiliary workers of different categories, and between auxiliary workers and their professional counterparts, should be reflected in the content of the course. Where, for various reasons, common courses cannot be given to different categories of auxiliary worker, it might be possible to arrange for them, in the course of their training, to take part in combined practical work in the field.

(6) In preparing for their different specializations, auxiliary workers should be taught how to learn about the community which they will be serving, and how to assess its problems in the field of public health. This can be done through visits of observation combined with some teaching about social organization, behaviour patterns and value systems of the particular communities concerned.

(7) In the above connexion, auxiliary health workers will learn much about the general, as well as the health, needs of the communities if they are in touch with community development programmes or other similar rural welfare movements. Health programmes, particularly in rural areas, cannot be considered apart from general social and economic progress, such as the community development movement is promoting.

(8) While focusing attention on community needs during training, auxiliary workers should realize that their work depends not only on learning and practising technical skills, but also on developing skills in human relations. This is difficult to teach unless it is related to visits of observation, contacts with village people in their homes and in clinics, and to relationships between students in the training centre.

(9) The need for health education as part of the function of all health workers, whether professional or auxiliary, should be recognized and related to all aspects of service rendered by the auxiliaries.

(10) In communicating with patients and the communities served, the use of the local language will be essential. Special consideration should therefore be given to the language of instruction in the auxiliary training centre.

In making general suggestions for guidance in the framing of curricula, it must be accepted that there must be variation in emphasis as between one country and another, and as between one category of auxiliary and another ; but the following items should be kept in mind :

(1) Possible need for further practice in the use of the language of instruction, or of the language that is in common use in field work, and also further instruction in arithmetic. In both cases, the practice can well

be given in terms having a bearing on the training, e.g., essays and reports can be corrected from the point of view both of style and accurate use of language, and of subject-matter, chosen from within an actual syllabus. In arithmetic the exercises can be based on aspects of health work, e.g., calculation of strength of doses, of lotions or of insecticidal sprays.

(2) Basic sciences, whether sociological, biological or physical. The extent to which these are included and the amount of each to be taught should be gauged only by their importance in providing a background to the comprehension of the main subjects taught.

(3) The actual theory and technical skill of the subjects each category of auxiliary must master. For instance, the amount and type of anatomy teaching should be just sufficient for the needs of a medical assistant who will provide first-aid to the injured and elicit physical signs to aid in diagnosis ; but less in the case of other categories.

(4) The accurate keeping of records.

(5) The care and management of equipment and stores, so that best value is obtained for a given expenditure.

(6) The knowledge and ability to render first aid and emergency medical treatment ; and the correct precautionary measures to be adopted in the use of modern insecticides, pesticides, etc.

(7) The training of illiterates or near-illiterates as auxiliaries demands special methods and techniques, which have been successfully developed in certain countries.

(8) Since auxiliaries sometimes have to work as substitutes for professional workers and have administrative control over other auxiliaries, some instruction in administrative and personnel management should be included.

4.4 Qualification and registration

It has been emphasized that conditions of service should be laid down concerning pay, leave, promotion, etc. in order to ensure an adequate status for the auxiliary as regards his position both in the service and in the community. It is considered that the status of the auxiliary can be more adequately governed or protected if greater attention is given to the recognition of the status of the qualifying examination than to educational requirements for entry into technical training.

Such courses of training and the standard of the final qualifying examination need to be assessed by all branches of government and relevant statutory bodies, and an official grading of the standards should be made and adopted. With regard to the grading it is advisable that this should not

be a unilateral recommendation of the ministry of health, but should be made to the appropriate establishment section of government in co-ordination with the ministry of education, teaching schools and the future employers of the auxiliaries. In the assessment of grading, it should be appreciated that lower educational standards for entry are compensated for by the inclusion of relevant general educational subjects in the curriculum and that this inclusion lengthens the course of the training. Thus shorter courses of purely technical training with higher educational standards for entry need to be equated with the longer courses having lower basic educational entry requirements but incorporating in the curricula both general and technical education.

As to examinations, it is thought that these should not be the only factor in determining the advancement of students during the course and towards eventual qualification. While the incentive of examinations is necessary for the students' continuous application to their work, it is recommended that the assessment of their progress should also be considerably influenced by interim tests, reports as to character and diligence, and other evidence from teachers as to their suitability for qualification. Consideration might be given to the principle, as practised among some professional grades, of a period of service after the actual award of the diploma, but before statutory registration. The final qualifying examination should receive official approval and be accompanied by the issue of a statutory diploma or certificate, thus conferring on the holder a recognizable standing within the community.

Bodies of auxiliaries are now represented in sufficient numbers, and are of sufficient importance to the functioning of health services that consideration should be given to their protection by the enactment of legislation, similar to that for professional personnel, which will require their registration and secure their conditions of service, as well as setting forth codes of conduct under which auxiliaries will work.

The formation of associations is also a valuable means of ensuring the status of auxiliaries within the country and a means through which their views may be adequately represented.

The maintenance of good morale demands that the auxiliary, subsequent to qualification, should be assured of prospects of a reasonable career in the public health service, particularly since there are strong competing demands from other agencies and often a limited supply of suitable human material.

Thus, within the ranks of the auxiliaries a salary scale with numerous incremental steps should be operative, and promotion opportunities should be extended to those having merit, ability and experience. In addition to the incremental scale, there should be a pyramid of promotion posts, with appropriate new titles in the field of administration, supervision and instruction, to which auxiliaries may aspire. The grading of such posts

should be commensurate with the responsibilities assumed and the importance of the work, and not be a matter of the individual concerned.

These two possibilities for advancement, however, will not alone satisfy the aspiration of a small number of auxiliaries with a higher education, particularly when the entrance requirements for training approach the level of those for professional personnel. Such auxiliaries will seek progress to a higher status of full professionals within their disciplines. Opportunities should be provided for those suitably educated to undertake further academic instruction, with protection of their previous service and pension rights, and adequate leave and allowances to support them and their families during this period of study. Facilities should also be provided for auxiliaries to improve their basic education so that they may benefit from the provision of further courses for advancement and promotion.

4.5 Location of training schools

Ideally, a school for health auxiliaries should be a specially designed, though not necessarily elaborate, project which includes facilities for the teaching of theory and for the demonstration of good hygienic practices. Housing for full-time staff and residences for students necessitate siting where there is ready access to practice fields and institutes, for each category in the school. Whilst the school should be complete in itself, it must not be isolated from service institutes or areas : thus, the usual service activities can be observed by the students.

Hence, if it is intended to produce hospital assistants or auxiliary nurses, the school should be in conjunction with a hospital reflecting in as many aspects as possible similar types of hospital wherein the qualified auxiliary will subsequently be required to work. Particular emphasis is placed on the principle that facilities within such a hospital should reflect the facilities available in normal non-training hospitals throughout the country, so that the appropriate methods and techniques may be taught.

Considering the need to train auxiliaries for both urban and rural health requirements, the outskirts of provincial or regional towns are thought to be more appropriate than the larger national institutes of cities. Such a setting will allow of access to rural as well as to urban conditions, servicing of the institute, adequate amenities for the staff, and residential accommodation.

Residential accommodation is considered most essential as providing a suitable climate for the total education of the student, as opposed to purely technical education. Such a communal living experience can be utilized to establish a healthy environment and to inculcate a general sense of discipline. Residential accommodation for students and teachers also permits the encouragement of extra-curricular activities to the furtherance of student-teacher relationships.

The combined training of various categories and grades of auxiliary workers and of professional workers is desirable in that it reflects during the training period the necessity, during a subsequent work-life, of working together as a team to the ultimate benefit of the patient and community. Certain safeguards must be appreciated in the organizing of such a combined training institute, to ensure that undue emphasis is not laid on the training of one category over another, that the student status of all categories is protected, that there is an adequate amount of practical work for the students, and that common training is carried out. A final safeguard is that training staff need to appreciate the trainees' different levels of education, and their ability to assimilate learning, and to select teaching methods accordingly.

5. TRAINING OF TEACHERS OF AUXILIARIES

It will be clear that a large part of the success or failure of an auxiliaries' training establishment will rest on the personality and ability of the director. Ideally, a director should be possessed of the qualities set out below for teachers of auxiliaries. In addition, however, he should have had previous experience in a responsible administrative post either in an auxiliaries' school or in the governmental health service, preferably with rural work including hospitals and health centres.

In all fields it is desirable that teachers of auxiliaries be drawn from the ranks of professionally trained persons ; even so, it does not necessarily follow that such people will have had special training in educational methods. Moreover, in some countries, it has been necessary to select mature and enterprising auxiliaries to undertake teaching duties in their own subjects, though in general auxiliaries are better employed as field instructors in association with classroom teachers. In both the above cases, arrangements should be made to assist the future teachers in acquiring some skill in teaching method by either short- or long-term special training courses.

The auxiliaries chosen to serve as instructors will have the advantage of possessing an intimate knowledge of both the work to be done and the circumstances in which it is to be done. The risk is that such persons will have too restricted an educational background to enable them to direct any large-scale training programme successfully. Therefore, they stand to benefit from the supervision, guidance and stimulation which can be provided by one or two full-time teachers.

Though not always practicable, it is desirable that persons selected for teaching posts should have expressed an interest in teaching work and have demonstrated some past experience or aptitude for this. Where part-time teachers have to be employed, it is essential that one or two

full-time teachers should also be available so that the training course can be adequately organized and the difficulties of maintaining a regular teaching schedule, which are inherent in part-time teaching arrangements, may be to a certain extent offset.

Student auxiliaries generally have a narrower background of experience and less critical perception than more highly educated students, and it is a more difficult task to teach them than to teach undergraduate students at university level. It is therefore of the highest importance that teachers of auxiliaries should not only be competent within their own field of work, but also have considerable experience and knowledge of the art of teaching.

Where foreign teachers are used, the preparation of national counterparts to succeed them is a necessary corollary to their appointment, and their training is an inherent part of the foreign teachers' functions. Likewise, continuity of service of the national counterpart in the teaching profession is of paramount importance.

For the guidance of selection committees, it is recommended that teachers should possess the following qualities :

(1) A sufficiently extensive knowledge of their subjects to permit of a balanced presentation to trainees.

(2) Professional status, though in certain situations it is recognized that shortage of professional staff will necessitate the employment of auxiliaries : such teacher-auxiliaries should be selected from the more experienced and able auxiliaries and be given instruction in methods of teaching.

(3) Advanced preparation in educational methods.

(4) Extensive field experience, in order to be able to relate theory to current practice and to enrich the content of their knowledge.

(5) An aptitude for, and an interest in, teaching, a willingness to be trained in new teaching methods, and an ability to use several methods of presenting the same facts with the object of achieving instructive repetition without appearing to do so.

(6) Personal attributes of patience, a knowledge of students—both collectively and individually—and of their interests, capacities, aspirations and limitations.

(7) A knowledge of the relevance and importance of social sciences and human behaviour in public health teaching.

It is incumbent upon any teacher to be interested in the purposes for which his students are being trained and to be well versed in their sociological background, and the sociological background of the communities among which they will work. Armed with this knowledge the teacher

must then become versed in the modern techniques of teaching and learning. It is not sufficient for a teacher merely to be an expert in his own particular field.

Such understanding is facilitated if the teacher is conversant with the language of the students and able to teach in this medium. A presentation of knowledge in the students' own language also relieves the student of the burden of translating from a foreign language into his own language, and allows him to concentrate on assimilating the knowledge. It is also an advantage if the student has a working knowledge of a language that will open up additional resources and reading material.

Furthermore, it is essential that teachers relate their theoretical teaching to field instruction and accompany students in the field and in practical training institutes.

The training of professional health workers for teaching functions may take the form of a general orientation course for teaching staff, or may relate to teachers dealing with a particular subject. Ideally, those teachers recruited on a part-time basis who are already in professional posts could also benefit from training in the methods of teaching.

Orientation courses for teachers cover such subjects as :

(1) Refresher work and further study in actual subjects being taught.

(2) Varieties of teaching methods.

(3) Cultural background of students and communities.

(4) Methods of approach to the public to ensure co-operation, and methods of health education.

(5) Relationship of health workers and other workers in community development projects.

(6) Language studies.

(7) The extent to which relevant literature is available in the local language and in other languages in common usage.

While in practical teaching it is essential to work with small groups of students, it was generally agreed that for classroom teaching somewhat larger groups may be necessary. (At one WHO Regional Conference, an upper limit of 30 students per teacher was considered to be acceptable for classroom teaching.)

In view of the shortage of teaching personnel in many areas, it is desirable that every encouragement be given to potential teachers to persevere in the teaching profession through the promotion of adequate career prospects. Special teaching allowances may be an inducement and prospects for promotion to responsible posts should be open to experienced teachers. Scarcity of good teachers demands that such talents should not be wasted by absorption into other more materially attractive careers.

6. ORIENTATION OF PROFESSIONAL GROUPS IN THE USE OF AUXILIARIES

Unless the professional worker responsible for the supervision of auxiliaries has a clear understanding of the nature of the work status and responsibilities of auxiliaries, he will be unable to exercise his supervisory duties and to elicit their best efforts. The supervisor must be able to differentiate between the responsibilities thrust upon substitutes in the absence of professional personnel, and the normal day-to-day duties of auxiliaries acting in their familiar role as assistants to professional workers. The former situation often involves the auxiliary in carrying out functions beyond the scope for which his training has prepared him, but which are unavoidably assumed in the absence of assistance from professionals.

An understanding of these two aspects of the work of auxiliaries, and a considerable knowledge of their basic educational background, the content of their technical training, and the duties and responsibilities which they are called upon to discharge are an essential requisite for the proper functioning of professional staff in their supervisory roles.

This understanding could be acquired through attention to the basic undergraduate training of professional personnel—doctors, nurses, midwives, health inspectors and public health engineers. Such undergraduate training should emphasize both aspects of public health work and the personal problems and functions of auxiliaries. There is also the problem, which will remain for a long time to come, of orienting existing professional staff. This latter group can be best catered for by refresher courses in local health units and discussion groups comprising supervisors, teachers and auxiliaries. Orientation could also be achieved by joint field experience in both undergraduate and postgraduate groups.

7. SUPERVISION AND FOLLOW-UP OF AUXILIARIES AT WORK AFTER TRAINING

A professional worker should remember that a very large part of his supervisory role is to act as a teacher, regularly to refresh the auxiliary in his learning, to impart new knowledge, and to try to encourage a responsible attitude to work. The field supervisor, more often than not, is a somewhat harassed medical or paramedical worker, but he should realise that time spent in teaching his staff will in the end lessen his other duties. Such teaching must necessarily be by actual case-work and problem studies.

When supervision in the field is necessarily sparse it is obvious that greater effects will be produced if a policy of advice and encouragement,

rather than a disciplinary one, is followed, and if due consideration is given to limitation of learning, the demands of the job and the isolation of the workers.

Supervision is generally exercised by medical or paramedical personnel working in the same field, and it is suggested that this supervision can be made more effective if there is co-ordination of effort between these supervisors. For example, the public health nurse visiting to supervise nursing, midwifery and home visiting should, at the same time, supervise the general hygiene of the centre and living quarters ; the public health inspector, in addition to attending to the local environmental sanitation activities, should check the communicable disease control and records as well as the health education material and results. The supervising doctor will find that his time can be spent on medical consultations and specific clinics, and, most important of all, that he will be able to hold group discussions with the auxiliary staff on the week's work and progress. He should also seek to reinforce the authority of the auxiliary-in-charge and guide the health centre along the route leading to self-responsibility.

The supervisor must learn to work to the level of the staff and not insist on too high a standard in the beginning. The raising of standards of work must be gradual and by encouragement ; too much criticism of mistakes leads to discouragement. Likewise it is necessary to equate the workload with standards of work ; too much interest in numbers of patients has an adverse effect on the amount of domiciliary visiting, follow-up visits and health education—all of which are essential. What requires to be ascertained in the group discussions with the auxiliaries is whether each problem or case has been thoroughly and completely dealt with by the staff as a team. Cognizance must be taken of the fact that probably each rural centre has too heavy a case-load, and too great an area to cover. Constant reiteration of the value of team-work activities is necessary if the work of the individual auxiliaries is to be co-ordinated. One of the ways of accomplishing this is to adopt the " family folder " type of record system.

Finally, encouraging the auxiliary to a high standard of conduct and ethics by precept and example is a prime responsibility of the supervisor.

The follow-up of auxiliaries after training involves some form of evaluation, of the auxiliary on the job, of the results of the training he has had and of the skills and knowledge he has acquired and is using. The evaluation might take various forms. The professional personnel who supervise an auxiliary might make an assessment of his efficiency on the job in terms of the use of his acquired skills and of his personal conduct as a health worker. An additional assessment, also by the professional supervisors, might be made of him as a *persona grata* within the public health profession, and in relation to the community in which he works. Finally, the auxiliary might be encouraged to make an appraisal of the training course in the light of the work to which he has been assigned, and

his confidence in his ability to perform his various tasks. Another type of evaluation might be undertaken by the team working in a health unit. This would emphasize the collaboration between members of the team, and the adequacy of their training and supervision in terms of the programme of work envisaged.

A further kind of evaluation, from a more external point of view, could be carried out by a foreign group invited by the government to review the work and training of auxiliaries.

Provision of competent supervision will, of itself, provide a continuous appraisal of the work situation. The good supervisor needs to go further than merely identifying shortcomings and strength. He should consider whether or not the worker's training has properly prepared him for his duties, whether there is an unsatisfactory mental outlook, whether social and other local factors are militating against good work.

Finally, has supervision failed to provide the necessary guidance, counselling and support to enable the worker to overcome the deficiencies? The supervisor must be prepared to discuss with the auxiliary his various weaknesses and strengths. Similarly, in the compiling of confidential reports opportunities should be taken of having frank discussions with the auxiliary concerned. Under no circumstances should confidential reports be forwarded without the substance of their contents being communicated to the auxiliary.

Apart from assessment along the lines indicated above, service heads should keep in mind the need for periodic broad appraisal of the extent to which teams of workers as well as individuals are fulfilling the intention of given programmes.

Attention is drawn to the need for continuity of appraisal by all personnel in respect of all disciplines, whether in supervising in the field, in teaching units, or in administration. To this end, confidential reports, questionnaire techniques, and the personal approach all yield valuable information; discussion groups composed of supervisors, teachers and auxiliaries can likewise be extremely revealing.

Supervision is also a valuable means of maintaining the morale of the auxiliary worker by giving guidance, support, and counsel, so that the auxiliary is constantly reassured of his status in the team. In the remote areas, where personal visits are infrequent, advantage should be taken of methods of continuous in-service education and information through news-letters.

The situation exposed by assessment might be made the subject-matter of refresher courses. At such refresher courses there will be an opportunity in the exercises of the curriculum to observe auxiliaries after their period of work in the field and to note weaknesses and strengths both in individuals and in the services in which they work. There will also be excellent opportunities to note those auxiliaries who have developed qualities which

might mark them as persons to be watched for promotion and greater responsibilities. It is through such meetings that the State, constantly on the watch for recruits to replenish and expand its professional cadres, will have the opportunity to select promising auxiliaries, give them the higher education they require for entrance to professional schools and see them through to entrance into their professional and technical establishments.

8. INTERNATIONAL CO-OPERATION

The Committee recognized the importance of international co-operation in the field of auxiliary utilization and training by such measures as the holding of meetings at WHO Headquarters, and the organization of conferences, seminars, and study groups within or between regions.

Of particular importance is assistance given directly in the form of: (*a*) substantial information as to the ways in which auxiliary training is organized to meet the situations in various countries ; (*b*) advice and aid in establishing training institutions ; (*c*) assigning teachers ; and (*d*) providing fellowships for the strengthening of teaching schools and services.

Annex

LIST OF RELEVANT WHO PUBLICATIONS AND DOCUMENTS

The following reference material was used in the course of the preliminary work and in the deliberations of the Committee :

EXPERT COMMITTEE ON PROFESSIONAL AND TECHNICAL EDUCATION OF MEDICAL AND AUXILIARY PERSONNEL (1950) *Report on the first session (Geneva, 1950)*, 35 p. (*Wld Hlth Org. techn. Rep. Ser.*, **22**)

EXPERT COMMITTEE ON NURSING (1950) *Report on the first session (Geneva, 1950)*, 30 p. (*Wld Hlth Org. techn. Rep. Ser.*, **24**)

EXPERT COMMITTEE ON ENVIRONMENTAL SANITATION (1952) *Second report (Geneva, 1951)*, 21 p. (*Wld Hlth Org. techn. Rep. Ser.*, **47**)

EXPERT COMMITTEE ON ENVIRONMENTAL SANITATION (1954) *Third report (Geneva, 1953)*, 25 p. (*Wld Hlth Org. techn. Rep Ser.*, **77**)

EXPERT COMMITTEE ON PUBLIC HEALTH ADMINISTRATION (1954) *Methodology of planning an integrated health programme for rural areas. Second report of the Expert Committee on Public Health Administration (Geneva, 1953)*, 46 p. (*Wld Hlth Org. techn. Rep. Ser.*, **83**)

EXPERT COMMITTEE ON MIDWIFERY TRAINING (1955) *First report (The Hague, 1954)*, 21 p. (*Wld Hlth Org. techn. Rep. Ser.*, **93**)

EXPERT COMMITTEE ON PROFESSIONAL AND TECHNICAL EDUCATION OF MEDICAL AND AUXILIARY PERSONNEL (1956) *Third report (Geneva, 1955)*, 19 p. (*Wld Hlth Org. techn. Rep. Ser.*, **109**)

EXPERT COMMITTEE ON NURSING (1959) *Public health nursing. Fourth report of the Expert Committee on Nursing (Geneva, 1958)*, 31 p. (*Wld Hlth Org. techn. Rep. Ser.*, **167**)

Report on the World Health Organization Conference on Auxiliary Nursing, New Delhi, 3-15 November 1958 (Unpublished document SEA/NURS/34 issued by the WHO Regional Office for South East Asia), 35 p. and annexes

REGIONAL COMMITTEE FOR SOUTH-EAST ASIA, THIRTEENTH SESSION. *Evaluation of training programmes for auxiliary health personnel in the South-East Asia Region* (Unpublished document SEA/RC13/4 issued by the WHO Regional Office for South-East Asia), 19 p.

REGIONAL COMMITTEE FOR SOUTH-EAST ASIA, THIRTEENTH SESSION. *Conclusions and recommendations arising out of the technical discussions on evaluation of training programmes for auxiliary health personnel in the South-East Asia Region* (Unpublished document SEA/RC13/15 Rev. 1 issued by the WHO Regional Office for South-East Asia), 11 p.

The Committee also wished to express its appreciation of several working papers contributed by individual members of the Committee and by the WHO Secretariat.