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LONG-TERM INTER-COUNTRY PROGRAMME IN
HEALTH LABORATORY SERVICES

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1. INTRODUCTION

Laboratory services are an essential component of each National Health Service at each level of the health administration. Their development should be planned and implemented in accordance with the needs and priorities of the medical and public health services.

While WHO assistance to countries is provided at the request of governments, the inter-country activities proposed by WHO are based on a careful analysis of national programmes and on the assistance already provided by WHO and bilateral agencies. This analysis permits WHO to suggest the fields where inter-country programmes can make the best impact on a large number of countries, including those where the need is manifest and those where the experience gained may provide a useful contribution.

Since 1960, when the first Regional Seminar on Health Laboratory Services was organized in Manila bringing together directors of the laboratory services in fifteen countries of the Western Pacific Region, inter-country activities in the field of laboratory services have been associated with the work of the regional advisory teams in venereal diseases and treponematoses, tuberculosis and communicable diseases, and the Malaria Eradication Training Centre. Since 1969 the smallpox programme has provided assistance to countries in the production of freeze-dried smallpox vaccine and in the laboratory diagnosis of smallpox. In February 1971, the Third Course on Basic Immunology started at the WHO Immunology Research and Training Centre in Singapore. There were five participants from the Western Pacific Region. The second Regional Seminar on Health Laboratory Services will take place in 1972.

/The assistance ...

The assistance provided until now demonstrates that there is a need to develop activities in the frame of a co-ordinated comprehensive programme. It is evident that it will not be easy to satisfy everybody. It will, however, be a challenge for WHO to develop inter-country programmes whose aim will be to strengthen activities which are no longer of secondary importance and to reduce basic inequalities between countries by tackling technological problems and ensuring the reliability and comparability of results at national and international levels.

The development of laboratory services is a dynamic process involving organizational, technological and staffing aspects.

It is already possible to foresee:

- (a) the time when countries will no longer need classical technical assistance, will only require advisers in more highly specialized fields, and will use more widely the services of short-term consultants and fellowships;
- (b) the wide-scale use of automation in all laboratory disciplines, the introduction of telediagnostic and other simplified and more accurate routine techniques which will influence the type of training required by laboratory personnel;
- (c) the greater need for quality control, proficiency surveys and computerization to ensure that the data in all countries will be comparable at regional and international levels and rapidly available.

All these developments will require the strengthening of collaboration between countries at regional and international levels.

/2. PURPOSE OF THE ...

2. PURPOSE OF THE INTER-COUNTRY PROGRAMME

The inter-country programme in the field of laboratory services has the following purposes:

- 2.1 To strengthen and develop laboratory services at national level in areas where there is a need to supplement or complement other forms of assistance and government programmes in order to avoid the scattering of efforts on different subjects.
- 2.2 To stimulate the development of laboratory support to programmes which have been recommended by the World Health Assembly and the Regional Committee in order to facilitate to the greatest extent possible their simultaneous implementation.
- 2.3 To ensure that each country has qualified personnel who can train national personnel and serve as reference at country level.
- 2.4 To develop and co-ordinate quality control activities in order to obtain reliable and comparable laboratory diagnosis and control tests.
- 2.5 To investigate the magnitude of certain problems and needs and to organize common efforts for their study when country resources in terms of scientists, equipment and funds are not sufficient.

The mechanism to develop collaboration and co-ordination between countries in the same region in the field of laboratory services can apply the same methods used in other fields:

- (a) To study, with the help of consultant services or specialist teams, the laboratory problems in the Region, in order to assess needs and potentialities and to define by which means or form of assistance such problems should be tackled. The same method can also be used to assess the progress of a project in order to decide whether assistance should be continued, reoriented or terminated.

/(b) To provide the ...

- (b) To provide the specialists in each country with an opportunity to discuss in the frame of a seminar, conference or workshop, the presentation of an activity which WHO considers could be profitably undertaken as an inter-country project.
- (c) To organize at regional level courses in laboratory techniques with the purpose of (i) providing each country with the opportunity of sending a participant; (ii) encouraging the standardization of methods and reference preparations as this is essential if results are to be reliable and comparable; (iii) facilitating the introduction of systematic proficiency surveys at regional level; (iv) maintaining a high standard of quality control; and (v) stimulating contact, the exchange of information and direct assistance between laboratory specialists in countries of the Region.

3. LABORATORY DISCIPLINES AND SPECIALIZED ACTIVITIES FOR WHICH INTER-COUNTRY PROGRAMMES WOULD BE ADVISABLE AND PROFITABLE

It is not the intention to describe all activities but merely to present those which may have a higher degree of interest and appear to be useful. It is hoped that the more advanced countries will realize that the programmes proposed have a regional interest and that their collaboration is highly desirable. In fact, it is important for every country to contribute and collaborate according to its means.

3.1 Directory of Health Laboratory Services in countries and territories of the Western Pacific Region

It is proposed that the first step should be the visit of a consultant to countries and territories to collect the information required for the preparation of a regional directory of health laboratory services.

/3.2 Bacteriology

3.2 Bacteriology

3.2.1 The organization of a seminar for bacteriologists in charge of the laboratories of national tuberculosis programmes or especially concerned with tuberculosis work at central public health laboratories.

Standard methods and techniques used for the isolation and classification of mycobacteria and testing for drug sensitivity would be reviewed. Considerable progress has already been made with the assistance of the inter-country tuberculosis advisory team and the tuberculosis reference laboratory in Japan. It is, however, felt that before the gradual phasing out of this activity in the WHO programme over the next five years, a seminar would be very profitable.

3.2.2 The organization of a practical course for bacteriologists on the diagnosis of cholera, food poisoning and enteric diseases, including V. parahaemolyticus which can be a factor of confusion in the rapid diagnosis of cholera. The epidemiological, preventive and therapeutic aspects of these diseases would also be presented and discussed.

3.3 Biochemistry

Clinical biochemistry is becoming a very important laboratory discipline for public health, particularly the screening and early detection of metabolic and degenerative diseases. Comparability of results in biochemistry is linked to the techniques used and reference preparations either prepared in the laboratories or available on the market.

It is proposed that a consultant should visit the major biochemistry laboratories in countries of the Region to collect information on such matters as the utilization of automated equipment and to advise on how technical assistance and collaboration could be best organized at regional level and if preliminary work in quality control is needed. This activity would be part of a wider programme tackled at world level by WHO in close collaboration with various international scientific associations.

/This would be ...

This would be followed by a course in biochemistry methodology which would include the essential laboratory techniques for nutritional investigations.

3.4 Serology

The organization of a course for bacteriologist-serologists in venereal disease serology, with particular attention to syphilis and gonorrhoea.

The bench classical methods still in use would be reviewed and information presented on new techniques. The major emphasis would be on the correct collection, transportation, preparation and conservation of specimens, the checking of antigens, the adjustment of tests with sera of known reactivity and the introduction of quality control.

A number of recent observations have shown that comparability of results is far from being achieved.

3.5 Blood Transfusion Services

In a number of countries in the Region the organization of blood banks presents many problems as a result of the little interest and absence of motivation to give blood, the inadequate control of paid or voluntary donors, lack of follow-up of patients receiving blood transfusions, and limited knowledge about the organization and functioning of a blood bank and the factors to be considered in the production of agglutinating sera, frozen and dried plasma, cryoprecipitates and plasma fractions.

The visit of a short-term consultant to collect information on the situation in various countries is proposed as the first step to a seminar on the organization of a blood transfusion service.

/3.6 Production and ...

3.6 Production and control of biologicals

The inter-country smallpox project established under a special allocation from WHO Headquarters will terminate at the end of 1972. Useful assistance has been given in collaboration with UNICEF which has provided freeze-drying equipment. This activity will need to be continued to maintain the quality of the vaccine and to ensure that the specialized equipment is functioning properly.

It is proposed, however, that a broader inter-country project should be established so that technical assistance in the production of smallpox freeze-dried vaccine can be continued and attention can also be given to the production and control of other biologicals.

Although rabies is present in a number of countries in the Region, its incidence (except for one or two countries) is generally low. Thus the demand for rabies vaccine in many countries is not great and its production by each country would be impractical and expensive. As the classical vaccines of the Semple and Fermi types are neither stable nor free from serious complications it is proposed that a WHO consultant might visit countries in the Region where rabies vaccine for human use is produced and controlled to determine in which particular country a safe, potent and stable vaccine could be produced and sold at cost to other interested countries. WHO would be ready to provide the necessary assistance and to arrange for the international control of each batch of vaccine.

4. CONCLUSIONS

It is suggested that the above proposals should cover the period 1972-1974 (see tentative timetable attached). The programme will be evaluated at the end of 1974 and further plans for subsequent years will be submitted to the Committee for its consideration. If approved by the Committee the proposals will be included in the List of Additional Projects for the years concerned.

ANNEX

TENTATIVE TIMETABLE

PHASE I

- 1972 - Second regional seminar on health laboratory services, Manila (already programmed).
- Visit of a consultant to countries and territories in the Region to collect the necessary information for the preparation of a regional directory on health laboratory services.

PHASE II

- 1973 - Seminar for bacteriologists (tuberculosis).
- Visit of a short-term consultant to the major biochemistry laboratories in the Region.
 - Course in venereal disease serology.
 - Start of a long-term project for the production and control of biologicals.

PHASE III

- 1974 - Course in enteric bacteriology, including cholera.
- Visit of a short-term consultant to collection information on the organization of blood transfusion services in countries and territories of the Region.
 - Course in biochemistry and related haematology.
 - Visit of a short-term consultant to countries producing rabies vaccine for human use.