EM/RSR/3
EM/Reg.Ad.Com.Bio.Res./7

ENGLISH ONLY

REGIONAL ADVISORY COMMITTEE ON BIOMEDICAL RESEARCH, SECOND MEETING

Alexandria, 23 - 26 March 1977

The views expressed in this Report do not necessarily reflect the official policy of the World Health Organization.

TABLE OF CONTENTS

I INTRODUCTION

The Second Meeting of the Regional Advisory Committee on Biomedical Research (RACMR) was held from 23 to 26 March 1977 in the Conference Room of the Eastern Mediterranean Regional Office of the World Health Organization, Alexandria, Egypt. Dr M.M. Mahfouz, Chairman of the First Meeting of RACMR, opening the meeting, expressed his pleasure at seeing old friends again and welcomed those who had joined the Committee.

Dr A.H. Taba, Director, WHO Eastern Mediterranean Region, extended a welcome to those members of the Committee who were assembled for the second time, and to the other distinguished scientists from the Region, who had spared time from their duties to join the Committee as observers or consultants. He stressed that everyone was present as an individual scientist, and each would speak in his personal capacity and not as a representative of his country.

Dr Taba pointed out that quite intensive activities had taken place since April 1976 as a result of the First Meeting, which had very rightly, covered many topics in a broad discussion on almost every aspect of the research needs of the Region.

Background documents had been prepared for review by the Committee as to how it was proposed that the Committee would work, how the Regional Director could ensure an appropriate scientific and technical input to the evolving research programme in the Region and on the mechanism that should be used by the Regional Office to put into operation and promote the needed research activities.

Analysis of responses received to a questionnaire, compiled by the Committee last year and sent to the main scientific institutions in the Region, was presented in the draft "Directory" of institutions involved in Biomedical Research.

Dr Taba then referred to two high-level teams of consultants; the first visited four countries (Egypt, Iran, Iraq and Sudan), the second visited Pakistan, in order to carry out the RACMR's recommendation to improve the quality of available information about the research potential of this Region. As could be seen from their reports, which were each landmarks in the development of knowledge regarding the research capabilities of the Region, the consultants felt that, while there were substantial potential research resources in the Region, there was still a long way to go, particularly in developing an effective cadre of trained research workers, co-ordinating the research efforts in individual countries, and focussing research efforts nationally and regionally on ways to resolve the most urgent problems of this Region.

As clearly identified at the last meeting of the Committee, the greatestneed in the Region is for applied research, designed to analyse the quality and quantity of the health care services delivered to populations.

This was the overriding issue. The question was not so much: "How do we obtain more basic scientific medical knowledge about health subjects?" but "How do we apply the knowledge we have to those who need it?".

In view of this, a background document was prepared on the "Need for Research in Health Services Manpower Development", which presented a carefully reasoned argument for undertaking research of this kind, and also some preliminary thoughts which, if acceptable, could readily be developed into a regional research programme on this subject. WHO had already had discussions with other scientists in the Region, and outside, which could enable them, given the necessary funds, to move forward with an active programme of health services development research.

Dr Taba then made a brief reference to the substantial number of activities, of a research and development nature, continually in progress in the Region in collaboration with WHO. This included work on the epidemiology and control of communicable diseases; cancer activities through a Regional Advisory Panel and the collaborating centres in this field; development of programmes in maternal and child health, and the research and development component of the large-scale activities in educational planning and technology. These programmes followed the directives of the Regional Committee. The overall trend of change in WHO programmes towards increased emphasis on technical co-operation with Member States demanded that WHO involve itself increasingly in a cycle of activities which, beginning with research and investigation and moving through projects and programmes, were susceptible to evaluation in the context of the needs of countries, and could result in activities whose output would be measurable.

In the Programme Budget proposals for 1978/79, approved by the Regional Committee in October 1976, research activities and the role of the RACMR had been given a high priority. In particular, it was stressed that "the outcome of the programme will be judged by the extent to which biomedical research in the Region is undertaken on problems which are of an urgent nature and directly related to the health of the people, as well as the application of the results of such research to the solution of these problems".

Naturally, in these research efforts, WHO looked not only to its scientific advisers, but also to the Member Countries themselves to define their priorities.

On examining the main interests of the countries, it was clear that their overriding pre-occupation was with health services development; with the design of health services to match the needs of the people; with the training of the right kind of personnel in the right numbers to meet those needs; with adequate health coverage - particularly to those hitherto denied access to benefits of health services - and with an appropriate quality of services to match each country's aspirations.

An open-minded approach should be taken to regional problems. One of the resources of the Region which had received scant attention until now was the area of traditional and herbal medicine. Research into means of possibly associating traditional healers with the network of health services delivery could perhaps receive more attention.

Finally, Dr Taba referred to the RACMR's recommendation concerning the possibility of establishing a special biomedical research fund and hoped that, on the basis of the recommendations related to item 6 of the Meeting's Agenda, a regional programme would be developed, which could be submitted to governments of the Region for financing on a voluntary contribution basis. On the basis of the generous and collaborative attitude to date of the countries of the Region, Dr Taba expressed great hope that necessary funds would be forthcoming to support and provide additional impetus to the Regional Biomedical Research programme.

II ELECTION OF OFFICERS AND ADOPTION OF AGENDA

The following officers were elected by the participants :

Chairman	Lt.Gen. A.N. Ansari, Secretary of Health Ministry of Labour, Manpower, Health and Population Planning Islamabad
Vice-Chairman	Dr N. Mourali, Director Salah Azaiz Institute Tunis
Rapporteur	Dr C.M.H. Mofidi Professor of Human Ecology and Deputy Chancellor University of Teheran Teheran

The Agenda was approved with some amendments (Annex II).

III THE ROLE OF THE REGIONAL ADVISORY COMMITTEE ON BIOMEDICAL RESEARCH IN THE OPERATION OF THE REGIONAL RESEARCH PROGRAMME

The document was introduced by Dr Taba, Regional Director, who stated that as a result of resolutions adopted by the World Health Assembly (WHA27.61) and the Executive Board (EB35.R.35) calling for greater involvement of the Regional Offices in the research activities in their respective Regions, within the WHO global Biomedical Research Programme, a Regional Advisory Committee on Biomedical Research (RACMR) was established to advise the Regional Director on research activities which might be considered for a regional research programme. The RACMR held its first meeting in the Regional Office from 6 to 8 April 1976 and its recommendations have been followed very closely. He looked forward to receiving the advice of the present meeting. He then reviewed the document and the role of RACMR.

In the discussion that followed various aspects of the terms of reference - membership and terms of appointment; method of work, collaborating centres; collaboration and co-ordination of research activities, dissemination of information, methods of financing of research programmes and training of research workers - were discussed. The text of the terms of reference incorporating all amendments and suggestions is as follows:

I TERMS OF REFERENCE OF THE RACMR

RACMR would advise the Regional Director on the following matters:

1. National and regional research policy.
2. National and regional priorities in research.
3. Methods and means of co-ordination at national, regional, inter-regional and global/HQ levels.
4. Promotion and establishment of research potential and capability nationally and regionally.
5. Promotion and establishment of data base information systems on national and regional basis.
6. Specific aspects of particular research projects.

II MEMBERSHIP AND TERMS OF APPOINTMENT

Membership of RACMR would be restricted to outstanding research scientists selected from the scientific community of the Region on the basis of merit, whether they are heads of research agencies or not; the group could in fact be constituted of a judicious mixture of scientists and heads of

institutions from various disciplines. To the extent possible a balanced geographical distribution would be maintained. A total of twelve to fifteen members should probably be appropriate. Due consideration would be given to including Regional members of the global advisory Committee on Medical Research.

All members of the RACMR will initially be appointed by the Regional Director for a period of two years. At the end of this period, one-third of the members would be replaced by new members; the remaining two-thirds would be replaced in the following two years. This practice would continue; thus membership of the committee would ultimately be for three years. The chairman would be elected for one year by the committee during its annual meeting.

III METHOD OF WORK

1. Frequency of meetings

RACMR would meet annually to begin with and, as its work proceeds, the frequency of the meetings could be adjusted suitably. Whatever the frequency, however, adequate preparations should be made for each meeting so that as much as possible could be achieved.

2. Agenda and planning of meetings

Topics for inclusion in the Agenda of the next meeting will be prepared by the Regional Director, taking into account advice from the Committee itself, or any individual member or members.

Final preparation of the Agenda and planning of each meeting would be in consultation with the Chairman of the Committee.

3. Presentation of programmes

Research programmes should be presented to the RACMR in a form that would facilitate discussion. This could be achieved by reviewing the problems, specifying the proposed research priorities, preparing programme summaries, giving them to one or more Committee members for study before presentation to the meeting for discussion, and/or arranging visits by such members for consultations with others involved wherever this appeared feasible and desirable.

4. Outside expertise and consultantship

The RACMR will have scientists of various disciplines as members, but cannot be expected to be always able to review all spheres of

biomedical research. Hence, whenever necessary, expert advice may be drawn for review of a particular area of biomedical research, of regional priority, along the following lines:

4.1 Scientific groups where the required review involves collaborative multi-dimensional in-depth study by a number of recognized experts in different fields or in different aspects of the same field.

4.2 Consultants or temporary advisers where a particular aspect of a problem may have to be reviewed in-depth, with the outside help of a scientist recognized for his or her contribution to that particular subject.

4.3 Task forces where there is a need for formulating, implementing and evaluating research projects with specific missions, which WHO would like to sponsor and to establish a time-target for projects identified as a result of in-depth review and study, either by RACMR itself or by scientific groups/consultants/temporary advisers.

In all these cases, the nature, extent and complexity of work, the quality of the members, the terms of reference and the time-target should be clearly specified as far as practicable.

IV ATTENDANCE AT SCIENTIFIC MEETINGS AND VISITS TO RESEARCH INSTITUTIONS IN THE REGION BY MEMBERS OF RACMR

It would be helpful for members of the RACMR to attend, as observers, meetings of relevant scientific groups and similar meetings in the Region in their own subjects, thus enabling them to contribute more effectively to the work of the Committee and gain first-hand knowledge which would be valuable when the subjects are discussed by the RACMR.

Members of the RACMR should be encouraged to visit research workers who are co-operating with the Regional Office and they could help to disseminate information on WHO's scientific programme to national research organizations, thus opening the way for exchanges in fields of common interest.

V INSTITUTIONS IN THE REGION CO-OPERATING WITH WHO

Competent research workers and institutions are needed for high quality multidisciplinary research on priority health problems in the Region. For this purpose, dependable scientists and institutions prepared to initiate appropriate biomedical research activities should be sought. To maintain

high quality, it may be necessary to strengthen such institutions in terms of research facilities and manpower. In addition to officially designated WHO Collaborating Centres in this Region, RACMR may assist the Regional Director in identifying other institutions in the Region for development as centres which will contribute on specific subjects, depending on the present and future possibilities of such development, and the facilities and manpower available for the research. Where feasible, intra- or intercountry pooling of manpower and other resources may be encouraged for developing such regional research institutions. RACMR may take the initiative in this direction by preparing concrete proposals, either by itself or with the help of a task force.

VI COLLABORATION AND CO-ORDINATION OF RESEARCH ACTIVITIES

1. At national and regional levels

1.1 Collaboration

Institutions in several countries of the Region are already involved in biomedical research. However, it is not uncommon to find that an individual laboratory is not capable of undertaking a research investigation on multi-dimensional problems, which might be quite

feasible if a group of institutions were selected to study different aspects of the problem, depending on the specialized facilities and manpower they had available. This kind of collaborative research would probably enable a larger research programme to be undertaken than would be possible for a single institution. It would also encourage free exchange of information among the participating institutions and develop a deeper sense of co-operation. Moreover, collaborative research would prevent duplication of effort and ensure maximum utilization of scarce resources and trained manpower. To promote collaborative research, however, the RACMR would assist in identifying the institutions, assessing their capabilities and providing guidance to the Regional Director in co-ordinating the entire process of launching the research in which they would be involved.

1.2 Co-ordination

Advice on co-ordination of regional biomedical research activities is expected to be an important function of the RACMR. In view of the scarce research resources in the Region, it is extremely important that time and physical means should not be wasted as a result of duplication of effort. It may not be easy to co-ordinate the activities of different national institutions

and lead them in the desired direction to achieve a particular goal; it will be necessary for this purpose that each institution conduct its research in a coherent manner instead of acting in isolation, thus ensuring that the aggregate research efforts in the individual country or the Region produce the maximum benefit. The RACMR could play an important role in this respect. It might also be necessary to organize regional research groups for co-ordination. Alternatively, a member or a sub-committee within the RACMR might be responsible for technical co-ordination of research in particular fields in the Region and report to the RACMR, which could remain responsible for the overall co-ordination of regional biomedical research activities. Thus advice on co-ordination of research would be given by RACMR at intra- and inter-country levels, as well as intra- and inter-disciplinary levels.

2. At inter-regional and global level

The RACMR may advise on ways to promote collaboration and co-ordination of research in the problem areas common to this Region and neighbouring Regions, and in research areas of global significance (such as in the case of Global Programme of Research

on Tropical Diseases), within the framework of the global WHO policy and the policies evolved by the ACMR at WHO Headquarters. It may consider, among other ways: the exchange of reports of the meetings of all RACMRs, the meeting of the RACMR members (or a group of them) with other RACMRs, organization of inter-regional seminars on specific problems or exchange of scientific visits. It would be also advisable if the RACMRs could meet at least one or two months prior to the HQ ACMR.

VII CONSULTATIVE MEETINGS WITH MEDICAL RESEARCH COUNCILS OR ANALOGOUS BODIES

While the RACMR members would be appointed to the Committee as individual scientists and expected to function as such in their personal capacity, the heads or representatives of national medical research councils or analogous bodies could be invited to consultative meetings. Though such consultative meetings may not be needed frequently, there would be definite justification for convening them occasionally. While the RACMR would stress technical and scientific aspects, consultative meetings may provide an appropriate forum for dealing with administrative and policy matters relating to biomedical research, as well as exchange of information and crossfertilization of ideas among the responsible authorities.

VIII SPECIAL PROGRAMMES

The launching of special research programmes of regional importance, such as the subject of health services and manpower development, should be considered as soon as basic data are available and priority research areas identified. Such programmes might be implemented in conjunction with global special programmes, such as the Special Programme of Training and Research in Tropical Diseases, within the framework of expanded research programme or in co-ordination with similar special programmes of contiguous regions.

IX DISSEMINATION OF INFORMATION

Dissemination of information in the field of biomedical research is important in order to keep research workers up-to-date in their technical and scientific knowledge, which in turn results in further stimulation of research activity as such. The RACMR might make tangible contributions in this respect by assisting the Regional Office in organizing the issue of newsletters and preparing scientific documents, as well as by contributing to a central information service.

1. Newsletters

These might be prepared with a view to providing research workers, research administrators and even policy-makers of different countries with concise but relevant information. Placing sharp emphasis on biomedical research in the scientific, administrative and policy information would have the effect not only of stimulating research activities but also of interesting, motivating and benefiting the research administrators and policy-makers. Newsletters might be issued periodically (monthly or quarterly).

2. Scientific documents

These would be reports of reviews, investigations and other research. They would be printed and distributed by the Regional Office to relevant organizations or research workers as and when available, but probably not according to a definite time schedule.

3. Information service

In addition to issuing materials such as newsletters, scientific documents, etc., members of the RACMR should be encouraged to contribute to a central information service developed to meet the specific needs of research workers and institutions that could draw upon its resources, as and when required. The RACMR might assist and advise on the establishment of

such a service and efforts might also be made to develop sub-systems at the national level at a later date.

X SECRETARIAT

The work of the RACMR, as well as other activities listed in this document, may necessitate a strong input from the WHO Regional Office Secretariat. It could be foreseen that, pending the creation of a Research Unit and in particular in the early stages, all Regional Office technical staff would contribute in the areas of their discipline, under the co-ordination of the Regional Director.

IV IMPLICATIONS FOR A WHO REGIONAL RESEARCH PROGRAMME

The document was introduced by Dr Taba, Regional Director, who expressed his pleasure that the Regional Committee had already endorsed the overall programme of regional biomedical research and approved a sizeable amount of money out of the WHO Regular Budget for its support in 1978 - 1979. Other sources of funds may also be available from such sources as the Global Programme of Research in Tropical Diseases designated or undesignated voluntary funds from countries of the Region, a portion of which may be assigned to research and training.

After some discussion about various aspects of the development of regional research programmes, and emphasizing the overriding importance of training programmes for research workers, and the need to support potential nuclei of research in some countries parallel to the support centres of good standing in the Region, the Committee agreed to the following:

In order to implement a Regional Biomedical Research Programme it will be necessary to set up standard mechanisms within the Regional Office to allocate funds for research activities.

This should be administered with the maximum of flexibility and the minimum of paper work but, at the same time, it is important that the mechanisms should be made known to the Governments of the Region and sufficiently publicized, so that those who can be expected to make good use of them will know how to obtain them.

As far as possible it is felt that the Regional Office should be able to communicate direct with research institutions, and with universities, on the subject of research, in the same way as it has long done with great majority of medical faculties in the Region regarding education programmes, in order to avoid delay to the extent possible in the negotiations for implementation of research activities.

A series of mechanisms for research training awards: research grants, research contracts, and the continuation of the existing Visiting Scientists Programme, is proposed below.

In the case of research grants, contracts and training awards, it is anticipated, as discussed under section 3 on the role of the RACMR in the organization of the Regional Research Programme, that individual members of the RACMR, or special working groups set up for the purpose, or other scientists enlisted for specific purposes, will be asked to collaborate with the Regional Office staff concerned in the assessment of the applications. This will be carried out to the extent possible on a consultative basis, and, as with all other expenditure of WHO funds, the actual decision to implement a particular award or grant will rest with the Regional Director.

It is proposed that in addition to continuation and harmonious expansion of ongoing programmes at the Regional Office which have a direct impact on research development, mechanisms should be set up, or continued, under the following headings:

1. Research training awards

Research training awards are intended to enable:

(a) Individual research workers to spend a period of time, which would normally not be less than six weeks or above three months, working in a defined institution or laboratory under the agreed supervision of a specified professor or senior research worker, for the purpose of acquiring a particular research skill or technique.

(b) Such awards may be made either to establish research workers or to more junior research workers at the start of their career, but, in either case, the recipient must be clearly identified as devoting a substantial proportion of his time to research and to be pursuing a career in which research is a prominent component.

(c) Applicants should submit to the Regional Director a clearly defined request, authorized and approved by their institution and/or Government, related to research work in which they are already engaged - such work falling within the overall priorities set out by the Regional Biomedical Research Programme.

(d) Research training awards are distinguished from awards under the Regional Visiting Scientists Programme by the fact that they are specifically designed to improve technical competence and not only for exchange of views. It is reiterated that the awards will normally be for study in one single institution.

(e) It is recommended that consideration should be given to making approximately five such awards in 1978 and ten in 1979, to a total value in each year of US $ 25 000 and US $ 50 000, respectively. The number of such awards may be increased as funds become available under the Special Regional Biomedical Research Fund. The value of the award will be based on a combination of travel cost plus the appropriate stipend or per diem for the place of study; awards will be made in the form of a block grant to the individual. A detailed report on a prescribed form will be required at the end of the award.

2. Research grants

(a) A research grant is an award of a sum of money to an individual research worker, through his institution, in order to carry out a specified project or component of a project which relates closely to the priorities laid down in the Regional Biomedical Research Programme.

(b) It is anticipated that such grants will not exceed US $ 10 000 and will not be made normally over a period longer than two years in any given instance.

(c) Applications would require to be made in a prescribed form to the Regional Director, who will lay down regulations for the purpose.

(d) In approving each Research Grant, the Regional Director will specify the terms and conditions on which it is to be made, the items, including supplies and equipment, staff costs, training costs, travel and reporting costs on which it may be expended, as well as the form and periodicity of reporting required.

(e) It is recommended that consideration should be given to making approximately five such grants in 1978 and ten in 1979, to a total value of US $ 50 000 and US $ 100 000 each year, respectively. The number of such grants may be increased as funds become available under the Special Regional Biomedical Research Fund.

3. Research contracts

The Regional Office may enter into a specific contractual relationship with a given research institution or institutions (whether within the Region or outside) for the carrying out of a given project or series of projects within the priority subjects laid down.

Necessary regulations for, and the format of, such contracts will be laid down in each individual case, but, in general, it is visualized that these will be used for research commissioned by WHO in order to fulfil recommendations of the RACMR and, in particular,

with a view to initiating or stimulating research in subjects or in areas indicated by the RACMR.

4. Ongoing programmes

WHO EMRO has had, since its inception, several programmes which have had impact on the development of the research capabilities of several academic institutions of the Region. They could be summarized as follows:

4.1 This programme, which has been in operation for a number of years, will continue in operation financed from the Regular Budget. Its purpose will continue to be to promote exchange of ideas among the health institutions of the Region, and the general development of medical and related education, by means of a programme of exchange of visits of teaching staff and scientists. As in the past, the principal focus for recipients of awards under this programme may be either teaching or research.

4.2 Fellowships programme

Naturally, the existing fellowship programme will continue in the future, as in the past, to be available for the training of academic, including research, personnel on the same conditions as at present.

4.3 Provision of consultants and temporary advisers

The ordinary mechanism of WHO consultant and temporary adviser services will be applicable in appropriate circumstances to portions of the research programme.

4.4 Assistance to libraries

WHO will continue its support of medical and public health libraries, in terms of supply of books and journals within the limits of the available budget, training of librarians and assistant librarians, distribution of WHO publications and other documents and arrangements for contacts and co-operation between medical libraries in the Region.

Plans are being studied to identify and designate one of the major libraries of the Region, with ample facilities and connected with the MEDLINE system, as a WHO Regional Medical Library, to serve the regional scientists and scientific institutions as a regional reference library and biomedical communication centre.

4.5 Supply of equipment and supplies

WHO will continue with its programme of provision of equipment and supplies, within budgetary limits and as determined by the needs of projects, and to assist in the development of mechanisms for maintenance and repair.

4.6 WHO Revolving Fund and reimbursable procurement

WHO has been always at the disposal of scientific institutions to let them benefit from arrangements under the Revolving Fund system for the purchase of books, journals, equipment and supplies, including vehicles, as well as for payment of membership dues of the local institutions in international organizations and associations,

whenever there is difficulty in obtaining hard currency at local level. This programme will continue and is available for use by research institutions in need of these facilities.

5. Funding

The proposed programme will initially be funded out of the WHO Regular Budget, but the number and the amount of research grants and awards may be increased when funds become available from other sources.

V SPECIAL PROGRAMME FOR RESEARCH AND TRAINING IN TROPICAL DISEASES

Dr A.O. Lucas, Director of the Special Programme for Research and Training in Tropical Diseases, WHO Headquarters, presented information on the current status of, and the plans for implementing, the programme.

He stated that a meeting of WHO and other participants in the Programme, in December 1976, in Geneva, had considered and approved the technical content of the Programme. Two basic objectives of the programme were endorsed.

(a) Research and development

(b) Strengthening of research capability in affected countries.

The participants had also endorsed the inclusion of six diseases in the programme: malaria, schistosomiasis, filariasis including onchocerciasis, trypanosomiasis - African and American, leprosy and leishmaniasis.

The three main criteria for the inclusion of these diseases were as follows:

(a) The public health impact of the disease on the community

(b) The relative ineffectiveness of current control measures

(c) The promising expectation that research can produce significant break-through.

This was a primary list, but would be changed and added to in the light of future developments. Still it was interesting to note that several of these diseases also appeared in the list of research priorities proposed by the RACMR in April 1976.

The strategy for the special programme was to utilize scientific working groups "SWG" ("task forces"), consisting of eminent scientists, to plan, implement and monitor the research programme for each disease. In addition to the SWG's for these six diseases, transdisease SWGs would be set up for interdisciplinary areas - epidemiology, socio-economic aspects, vector control, especially biological control, and basic biological sciences.

The strategy for strengthening of research capability was outlined in the Special Programme document TDR/WP.76.24. The collaborating centres to be strengthened would include:

(a) Principal centres, which would carry out research and training on a multidisciplinary basis.

(b) Special centres, which would tackle limited specific areas of a particular disease.

(c) Peripheral units, which would relate to the primary health care services for operational research and epidemiology.

There would be a research capability strengthening working group.

The Special Programme was a global one, and it was hoped that scientists and institutions from all over the world would participate. With respect to the strengthening of research capability, the initial emphasis would be on the African continent, but other tropical areas were already being involved.

In answering questions on funding of this programme and its distribution, Dr Lucas stated that the proposed budget of US $ 145 711 000 for five years (1977 - 1981) was arrived at by taking an aggregate of all programmes to be developed both in developing and developed countries and included funds for:

(a)	Research and development	US $ 114 996 000	79%
(b)	Strengthening bio-medical research capabilities	US $ 27 246 000	19 %
(c)	Technical administrative bodies	US $ 425 000	0.3 %
(d)	Management of the programme	US $ 3 044 000	1.7 %
	TOTAL	US $ 145 711 000	100 %

This budget was not a fixed one and might be adapted with the development of research work, the identification of capable new institutions and research workers.

During the discussion that followed, the following points were brought out:

- Initial investments for building up the research capabilities of research nuclei in developing countries were high, but would decrease as the institution becomes strong and operational.

- The Centres selected to participate in the programme had a dual responsibility to carry research and train research workers, as well as to assist other institutions to develop.

- The training component of these programmes should receive attention, since it was only with adequately trained research and operational staff, supported by a sound organizational structure, that the results of the research activities could be applied in the field, thus leading towards the final goal of this Programme which is the control of the disease.

- Training programmes should be developed, to the extent possible, within the developing countries; this not only would help to improve the scientific capabilities of developing countries and thus their self reliance, but would also help to reduce the problem of migration of research and operational workers. One method of training would be joint supervision of graduate research work, in affiliation with more advanced academic institutions in the developed countries.

- Already several institutions in the Region were being used at regional and international levels; these programmes should be further developed and assisted whenever necessary.

- Pharmaceutical firms were becoming less interested in research in tropical diseases and in particular in drug development. Every mechanism should be used to encourage these firms, which have ample facilities for basic, applied and clinical research, to collaborate with this Programme, including, whenever necessary, provision of funds.

- Provisions were made to create research training centres in English- and French-speaking countries of Africa, as necessary, as well as in Spanish- and Portuguese-speaking countries in other areas.

The question of co-operation and collaboration of the RACMR with this and other international programmes, was discussed at some length. It was stated that whereas some aspects of research could be most conveniently and effectively co-ordinated at regional level, some other aspects needed interregional and/or global co-ordination. For instance, the development of an effective malaria vaccine might be co-ordinated at international level, but operational research programmes, such as the control of malaria in savannah areas or the problem of chloroquine resistance, should be co-ordinated regionally. These programmes could be tentatively divided into four levels:

1. Epidemiological research - to determine the distribution and determinants of diseases, including behavioural factors.

2. Applied research - to determine the best operational methods of applying existing tools.

3. Creation of new tools (vaccines, drugs).

4. Basic research - to expand base of biological knowledge.

Item one was not transferable and needs to be applied locally and regionally.

Item two also should be applied locally and regionally, although some of the results might be transferable (e.g. control of schistosomiasis in man-made lakes).

Item three could more fittingly be carried out initially by the most highly developed institutions; the results were, in general, transferable between countries, regions and cultures.

Item four was intended to expand the broad foundation of knowledge and it was not compulsory for every country to embark upon it. It might, however, be of help in the future to solve some of the unknown problems and, of course, it was transferable.

RACMRs have an important role to perform in ensuring close co-ordination between the global programme and regional activities, including:

(a) Identification of regional priorities for research

(b) Provision of information about scientists and institutions who could participate in the Special Programme and where suitable set up task forces to deal with aspects of research of interest to the Region.

(c) Exchange of data about projects.

A great number of diseases covered by this Programme were highly prevalent in many parts of this Region. Thus, the Regional Office and RACMR's have not only an academic and humanitarian interest in this programme, but a great responsibility to co-operate and enter into a concerted effort of research, training and control activities with full determination and mobilization of effort.

VI REGIONAL RESEARCH RESOURCES AND POTENTIALS

1. Report of the visiting teams

The RACMR in its meeting of 6-8 April 1976 had recommended that every effort should be made to collect as complete information as possible and from all institutions involved in biomedical research or related fields. It also realized that this task would just be the first step in a series of co-ordinated efforts aimed at strengthening research institutions and personnel, identifying those centres and groups which would co-operate with WHO in carrying out research activities of priority interest to the whole Region, and building up self-sufficiency progressively.

In accordance with these recommendations, two survey teams were sent, one to a group of countries (Egypt, Iran, Iraq, Sudan), and the other to Pakistan. The reports of these teams were presented to the meeting and discussed as follows:

1.1 Biomedical and Public Health Research activities in four countries of the Eastern Mediterranean Region

20 September - 29 October 1976

(Document EM/Reg.Ad.Com.Bio.Res./2 - EM/RSR/2, February 1977)

The document, presented by Professor M.L. Dowidar, was followed by a long and intensive discussion.

The report was composed of an introduction and two parts.

The introduction contains general considerations on the survey carried out by the team.

The first part comprises general findings and conclusions on biomedical research in the Region and recommendations for future action.

The second part gives the findings and the conclusions reached by the group in each country visited.

The first part of this report, as amended following the discussions, appears as Annex III. The full text of the report may be obtained from the WHO Regional Office.

1.2 WHO Mission to Pakistan regarding collaboration in health research and training

4 - 10 April 1976

The mission was composed of:

- Professor S. Bergstrom, Rector, Karolinska Institute, Stockholm, Sweden - Temporary Adviser
- Dr M. Abdussalam, Chief, Veterinary Public Health, WHO Geneva
- Dr R. Wilson, Consultant, Office of Research Promotion and Development, WHO Geneva
- Dr A. Arif, WHO Representative, Islamabad, Pakistan

A document presented by Dr Abdussalam was discussed. The assessment and recommendations are summarized in Annex IV.

2. Profiles of Regional Research Institutions

Dr E. Hammoud presented the Directory of Institutions involved in Biomedical Research in the Region. In his introduction, he referred to the recommendation of the RACMR at its first meeting concerning the collection of as complete information as possible from all institutions involved in biomedical research or related fields, and said that a questionnaire, as modified and approved by the RACMR, had been sent to the originally listed 132 institutions, later extended to 214 institutions through the assistance of members of the RACMR, the WHO Representatives,or the responding institutions themselves.

Seventy-three replies received were compiled into the present draft Directory. WHO was now ready to take every action necessary to make this Directory as useful and complete as possible.

The RACMR expressed its appreciation for the extensive work entailed in the preparation of the document through the efforts of members of the Regional Office at no extra cost, and recommended for its completion the following:

- that members of the RACMR take charge of completing the list and the information about institutions in their home countries;
- that the WHO Representatives, where these exist, be also asked to help in this regard;
- to concentrate further at the initial stage on more

institutions actively involved in biomedical research and in particular on priority research areas;

- that the present Directory should be sent to all institutions (whether they have replied or not); this feedback will help completion of the existing information, in coverage and content;

- whenever possible, a separate list of research workers with their areas of interest should be assembled and distributed;

- that institutions be requested to prepare and distribute annual reports of activities - such reports to be attached to the questionnaire;

- that Medical Research Councils also be contacted; they would not only create a stimulus for completion of the questionnaire but could also provide useful additional information.

It was noted that WHO is developing a global information system, which will include project, programme and country profiles. The country and programme profiles could contain a complete description of the health problems of the individual country and of the Region, respectively. Information on the research programme institutions might also be included in these documents, in addition to being used for the purpose of research co-ordination and evaluation.

VII REGIONAL PROGRAMME FOR RESEARCH IN HEALTH SERVICES AND MANPOWER DEVELOPMENT

1. The need for research in health services and manpower development

Introducing the subject, Dr W.A. Hassouna referred to his background paper [1]. The desire for better health, however variously defined, had become increasingly evident. To satisfy the felt needs for health by a practical sequence of actions required not only a plan but also the resources necessary to implement such a plan. Allocation of resources depended to a great extent on the degree to which the satisfaction of particular needs, such as the need for health care, was instrumental in achieving or contributing to overall development goals. This simply meant that the size of resources allocated to the health sector in any given country was basically dependent on the size of the social product of that country rather than on the magnitude of the actual health needs of its people.

The facts indicated that resources in the health sector would be scarce in developing nations for some time to come, but these same facts made it all the more important for health professionals to use the allocated resources to satisfy the real health needs of the people to the utmost and to get the greatest possible benefit (i.e. contribution to overall development goals) out of these funds, however limited they might be.

Thus health authorities were required to deal with both efficiency and effectiveness in order to achieve wider coverage and better impact with the same resources.

---

1 The need for research in health services and manpower development

In order to face this challenge, health authorities needed to formulate a health policy which spelt out the overall health goals of the country, as well as how the country intended to satisfy society's health needs in a way that contributed to the country's overall development goals. The realization of such a policy was a function of legislation, availability, appropriation and utilization of resources.

This process involved a great number and variety of decisions at various levels in order to make a variety of "choices" among alternatives at various stages of this process. Naturally these "choices" might be made on the basis of:

(a) purely intuitive judgements (value judgements, expert opinion), or..;

(b) results obtained by scientific research, or..;

(c) a mix of (a) and (b).

In fact, the use of one method or another was highly dependent on the nature of the phenomenon or the problem to which the method was applied.

Yet making a "choice" was not an end in itself but a means to achieve a specific objective; hence the need to judge the choice by the outcome of its implementation, irrespective of the method by which it was made. Applying this logic to HEALTH, the health policy of any given country could only be judged by the outcome of such a policy

(i.e. changes in the HEALTH STATUS of the population attributed to the implementation of this policy). Naturally, this could only be done by examining and assessing the quality, quantity, organization and management of all types of resources used (i.e. inputs) to achieve policy objectives, and measuring this against changes in health status which could be attributed to the use of those resources. Thus scientific research becomes an indispensable tool to reach conclusions which could be used in introducing changes in policy, legislation or the nature of a health delivery system in order to improve or sustain the health status of the population.

During his introduction, Dr Hassouna spoke about the actual nature of scientific research. The word "scientific" conjured up images in the minds of many, of electronic machinery, test tubes and reams of mathematical formulae.

However, while the scientific method was often used in mathematics, chemistry, physics and other physical sciences, the scientific approach or model was a conceptual tool which could be used in many areas of inquiry, since it was a formal ordered approach whose objective was the establishment of a scientific truth in fact-finding research, or of a utilitarian objective, usually prescriptive in nature.

In the area of health services research, the objective of the scientific method was to assist in making decisions to change systems, i.e. to get something done. This implied descriptive, predictive, and prescriptive action (which includes establishment of goals and objectives and measures of effectiveness and efficiency) whereby objectivity was introduced into decision making.

Following a stimulating and lively introductory presentation by Dr Hassouna, which incorporated a number of visual illustrations of the concepts referred to, extensive discussion took place.

Opening the discussion, the Regional Director, after thanking Dr Hassouna, posed the question "How could the approaches outlined by him in his background paper and his verbal presentation be implemented?" That there was a need for them to be so implemented, Dr Taba had no doubt; and he illustrated the need for more effective information on which to base decisions regarding priorities with a case of a member government making very heavy expenditures on costly sophisticated equipment while unable to find modest funds of much smaller order for a cheap and effective immunization programme. Although the equipment concerned in his illustration cost something of the order of $ 1 million, and the immunization programme $ 50 000, the former was purchased but the latter was not implemented. How could evaluative research have helped that government to avoid that error?

Much of the first part of the discussion centred on the issue of priority-setting. Several approaches to this were alluded to. In summary it was agreed that the factors which required to be taken into account, in an appropriate "mix of scientifically-based and intuitive judgement-based priority setting" included:

- impact on the health of man;
- available resources human and non-human;

- cost-benefit;

- public opinion and the effective education of the public to make appropriate use of health services and health technologies;

- professional and technical opinion.

It was repeatedly reiterated that the evaluative research approach outlined by Dr Hassouna was fundamental in providing decision-makers with effective tools with which to weigh these factors in the balance before arriving at priority decisions.

There was also common agreement on the need for an accurate and meaningful data-base in each country regarding existing health status, morbidity and mortality patterns and available human and institutional resources. At the same time, specific problems regarding health services design and health manpower planning and prediction could be tackled, using the evaluative research approach, without waiting for the full flowering of an in-depth nationwide information system.

In the absence of proper bases for decision, the decision makers can obviously be influenced by the pressure of time and by those who are under the false pretention that they know the health priorities, by the false demands of the people and by the dramatization of certain health accidents or events by the newspapers.

There was a need to educate the people in how and when to use services. Otherwise, wrongly implemented programmes of health education will mean that the unfelt needs of the people become felt needs, leading to ineffective demands and eventually to ineffective use.

There was a need, only now coming to be recognized by either professionals or politicians, to pay much greater attention to societal participation, in determining need, implementing effective programmes and in all aspects of decision making regarding health matters. The fact that society continued to believe in and turn to "traditional" healing systems as opposed to "scientific" systems, had been referred to in the Regional Director's opening address, as well as by several participants. There was a need for careful evaluative research into the relative effectiveness of alternative approaches, including the work of traditional healers of all kinds and of medical systems other than that to which participants in the Meeting belonged. Indigenous practitioners and traditional healers have, above all, the ability to gain the confidence of the people, and to treat not only their bodies but their souls. Many countries have prevented such healers, who were nearer the people, from practising their skill, and scientific medicine has taken on itself total responsibility for curing diseases. However, in the absence of proper coverage and with the limited facilities and manpower put at the disposal of the people, this curative care could consist of the distribution of expensive placebos.

It was clear at the same time that in some countries in this and other Regions not only does traditional medicine flourish, but (for example Sudan and Pakistan) there is also sufficient contact between the systems for effective comparative studies to be undertaken.

Reference was made to certain well-respected studies in the Region (in Iran, Pakistan, Sudan) where the evaluative health research approach had taken full account of societal involvement, and where, as a result, new kinds of frontline or primary health care workers, directly drawn from hitherto deprived populations, were providing after carefully designed learning experiences, adequate services to contend with a high proportion of the health needs and demands of these populations. Numerous examples were given of how, as a result of taking proper account of societal concerns and interests, new badly needed services had grown up at minimum cost to the public treasury, and maximum return in terms of local effectiveness and acceptance.

The problem of resources (human and non-human) was another subject which was discussed in detail. It was customary to seek additional resources to improve the maintenance and utilization of local resources and so that the unexploited resources can be exploited. Outside the health sector, there are resources such as for agriculture, animal health programmes, communications etc., but because of the inability to have a real operational dialogue with other sectors they remain unexploited . In many cases agricultural or veterinary

workers could participate in several health related activities, particularly as they were located in rural areas and in touch with the population. By virtue of the services that they rendered, they had the confidence of the people and could help a great deal in certain types of action, such as nutritional or environmental programmes. Veterinarians also could easily participate in emergency cases, such as snake bites, disasters etc., and thus use could be made profitably of their contribution through a multidisciplinary educational programme.

With regard to the training and attitudes of research workers, it was agreed that there was need for major change in the image of the research worker himself, as well as of the health professional. The concept of superiority should go. Neither a physician nor a medical research worker should be seen as a superior person behind the walls of a sophisticated laboratory or clinic. Each should be seen as an ordinary man capable of utilizing the least complex and most simple methods to provide solutions to health problems.

Research attitudes and methods should be inculcated in health professionals when they were students; they should be taught to ask questions and to become used to solving problems.

Career structures depending on degrees and diplomas rather than on knowledge, skills and aptitudes were deplored, and the need to base employment systems on the latter rather than the former was stressed.

Acceptance of a genuinely integrated team approach to training and to problem-solving was overdue, and there was need to understand that true "integration" involved a whole hearted behavioural change on the part of those working together, as opposed to "co-ordination", which was often imposed from above, or from without, and hence artifical and shallow,

The need to help the decision makers themselves, including the political decision makers, to understand the evaluative research approach was agreed upon and WHO was urged to take steps to hold appropriately designed meetings at the highest level, at which this approach could be expounded and discussed.

The Regional Director responded to the discussion by expressing his agreement in principle with the opinions expressed and his belief that an active WHO programme in Health Service and Manpower Development should be implemented, as implied in this meeting and as recommended previously, along the lines of the evaluative health research approach so ably set out by Dr Hassouna.

2. Project Proposal for Research in Health Services and Manpower Development

The following draft project proposal was agreed on in principle by the Committee and the Regional Director indicated that the Organization would take the matter in hand. He anticipated settinguup a small scientific group to advise him on how best the draft proposal could be implemented:

"The purpose of the project is to undertake studies in selected areas of activity in Health Services and Manpower Development, in collaboration with the ministers of health and other institutional resources in the Region, in addition to developing research capabilities in ministries of health until such time as these ministries develop the capacity to undertake studies on their own, in collaboration with national institutes.

I OBJECTIVES

1. To develop a series of pilot studies in evaluative health services research; to provide technical and financial support for development of pilot studies of local and regional health services in countries of the WHO Eastern Mediterranean Region;

2. To develop research capacities in evaluative health services research in ministries of health and other institutions, such as schools of public health, schools of public administration, institutes of business management, institutes of planning and economic development, institutes of social sciences, research institutes and university faculties, wherever they exist;

3. To develop a mechanism for exchange of information on evaluative and operational health services research undertaken in countries of the Region and identification of potential institutional and manpower resources.

II DURATION

The project initially would be for five years.

III ACTIVITIES

1. The development of pilot studies

It is planned to undertake a number of collaborative studies regarding utilization of health services and the quality of services delivered, and to test appropriate technology for delivery of health services to the underserved population of the countries. Since effective coverage is the ultimate goal that ministries of health seek to achieve, evaluative health services research should be directed to studying available ways and means to achieve this goal. Socio-cultural, economic, organizational and technical factors affecting the utilization of health services in various countries of the Region should be the focus of such studies. In order to allow for comparison of results obtained from such studies, the Regional Office will engage a consultant to develop general criteria for designing the studies and to assist national experts in the actual design of their countries' studies. Technical assistance in various phases and activities of the study, e.g. statistical analysis, data processing etc., will be provided by the Regional Office upon request. Studies would be undertaken in the following groups of countries:

(a) Countries where potential manpower resources and institutions are available, such as Egypt, Iran, Lebanon, Pakistan, Kuwait. It should be pointed out that in these countries medical faculties, institutes for public health, institutes of planning, public administration, business management, economic development, social sciences, etc. exist and it is proposed to identify the manpower institutional resources which would collaborate with the ministries of health in undertaking these studies.

(b) Countries where the facilities, as stated in (a) above, are not fully developed but where there are a number of projects for basic health services, maternal and child health services and other collaborative programmes or projects in which WHO is collaborating. WHO staff would collaborate in these studies with the ministries of health. The topics for these studies would be discussed in consultation with the governments.

Provision: Consultant - 12 m/m
Project support - US $ 25 000

2. Development of research capacities in the ministries of health

It is proposed to undertake a survey of the available resources through visits of consultants and to identify individuals who are technically prepared and interested in these studies, also to assist governments in improving their capabilities through short-term research awards, literature and provision of short-term consultants for well-defined purposes.

Research Training Awards

The following two types of awards are envisaged:

(a) Non-degree training awards to provide competence in evaluative health services research. Such programmes should be tailored to meet the specific study needs of every candidate according to his background and level of competence in the various disciplines required for evaluative health services research, e.g. research methodology, statistical and mathematical techniques, data processing, etc. Candidates may study in one or more institutes, within or outside the Region. These fellowships should be awarded to junior staff members in ministries of health and other institutions who are interested in health services research. Candidates with post-graduate studies in public health should be given priority for these fellowships.

(b) Research participating awards geared to provide competence in evaluative health services techniques and the organization and management of such research. Selected candidates will participate in, rather than observe, ongoing evaluative health services research projects. This type of award will be most useful to staff members in research institutes who have done health services research.

National Training Courses

Assistance to national courses on evaluative health services research is another activity through which the Regional Office can participate in development of research capacities in ministries of health. Technical as well as material assistance could be given to national institutes which develop training courses on evaluative health services for personnel of ministries of health. Requests for such assistance should be submitted by the national institute and endorsed by the ministry of health.

Evaluative Health Services Research Manual

The development of a manual for evaluative health services research is of great importance in promoting and standardizing methods of conducting this type of research. This activity should be entrusted to a national institute which can draw upon regional and international expertise in this field,with EMRO's assistance.

Provision:	Research Training Awards	-	US $ 100 000
	Books and literature	-	US $ 50 000
	Consultants	-	6 m/m "

---

3. Establishment of Scientific Group

The RACMR endorsed the proposal and recommended its implementation. It also agreed with the expressed interest of the Regional Director in setting up a small Scientific Group on ways to carry it out.

VIII CONCLUSIONS AND RECOMMENDATIONS

1. The RACMR welcomed the initiative of the WHO Regional Director in setting out in a clear and precise way the Terms of Reference of the Regional Advisory Committee on Biomedical Research, and concurred that the role of the RACMR and the way in which it should function were as described in Section III of this report.

2. The RACMR endorsed the proposal of the Regional Office to implement a WHO regional research programme and the mechanisms for implementing it, including the following types of activity:

(i) Research training awards
(ii) Research grants
(iii) Research contracts
(iv) the Regional Visiting Scientists Programme

and noted and agreed that other ongoing WHO activities, such as the fellowships programme, consultant and advisory services, and the provision of supplies and equipment, would play an appropriate part, in the future as in the past, and continue to be available for the support of certain aspects of research activity.

3. The RACMR welcomed and endorsed the Regional Director's expression of intend to identify and designate one of the major libraries of the Region as a WHO Regional Medical Library, to serve regional scientists and scientific institutions as a Regional Reference Library and Biomedical Communications Centre.

4. The RACMR noted the information conveyed by the Regional Director concerning possible sources of funding for the Regional Research Programme, welcomed the generous decision to provide initial funds from the WHO Regular Budget, as well as the generosity of individual member countries and agencies in the Region, whose voluntary funds may be at the disposal of the WHO regional research programme.

The Regional Director's intention to devote an appropriate proportion of the Regional Director's Development Fund to research activities, and to continue to seek further voluntary donations for research projects, was noted and endorsed.

5. The RACMR appreciated the support of those individuals who contributed to the studies made of regional research potential in five countries to date, and welcomed the Regional Director's intention to have similar studies of resources carried out in Syria and Tunisia in 1977, and possibly other countries.

6. The RACMR strongly endorsed the continuing priority being given to research in Health Services and Manpower Development, especially with reference to primary health care, in accordance with the recommendations of its first meeting, and welcomed the Regional Director's response to the advice of that meeting to implement a region-wide project designated to undertake studies, in selected areas, in Health Services and Manpower Development, in collaboration with the Ministries of Health and other institutes resources in the Region, in addition to developing research capabilities in this field. In this connexion, they endorsed the principles of the evaluating research approach outlined in the background paper on the project and expressed their opinion that this approach is fundamental in providing decision makers with effective tools regarding the setting of priorities and the implementation of health programmes in the Region.

7. The RACMR appreciated the work done so far in compiling a draft Directory of Research Institutions, endorsed the intention to improve the information contained therein and accepted the responsibility of individual members of the RACMR to assist to the extent possible in improving the quality of the information available from their home countries.

Additional Recommendations

8. The RACMR recommended that a working paper should be prepared for its next meeting outlining ongoing and planned activities in

research on proposed activities of priority interest to the Region, and in line with the global Special Programme of Research and Training in Tropical Diseases. Suggestions should be put forward concerning additional specific research projects on these diseases, including their epidemiological and immunological aspects, which should receive WHO support.

9. The RACMR recommended that a working paper be produced for a future meeting, regarding the research manpower situation in the Region, with suggestions as to how it could be improved. Special emphasis should be given to a consideration of the career structure and conditions of employment of research workers; to the special needs for technicians and other middle level personnel; and to ways and means whereby WHO can co-operate in improving the overall research manpower situation.

10. The RACMR stressed the need for continuing attention to the creation of an accurate and meaningful data base in each country regarding existing health status, morbidity and mortality patterns and available human and institution. resources, and for strengthening of methods for the acquisition and exploitation of health and socio-logical indicators.

11. The RACMR recommended that the agenda of its next meeting should include a progress report on research activities currently being carried out with the collaboration or support of WHO in the Region.

ANNEX I

AGENDA

1.	Opening of the Meeting	
2.	Election of Officers (Chairman, Vice-Chairmen and Rapporteur)	
3.	The role of the RACMR in the operation of the regional research programme	EM/Reg.Ad.Com.Bio.Res./3
4.	Regional Research Resources and Potentials	
	(a) Report of the Visiting Team	EM/Reg.Ad.Com.Bio.Res./2 EM/RSR/2
	(b) Profiles of Regional Research Institutions	
5.	Implications for a WHO regional research programme	EM/Reg.Ad.Com.Bio.Res./4
	(a) Research grants	
	(b) Research training awards	
	(c) Research contracts	
	(d) Regional visiting scientists programme	
6.	Regional programme for research in health services and manpower development	EM/Reg.Ad.Com.Bio.Res./5
7.	Other business	
8.	Conclusion and Recommendations	
9.	Adoption of the Report	

ANNEX II

LIST OF COMMITTEE MEMBERS WHO PARTICIPATED

COMMITTEE MEMBERS

Dr M. Abdussalam
Director
International and Scientific Co-operation
Institute of Veterinary Medicine
Berlin

Lt.Gen. A.N. Ansari
Secretary of Health
Ministry of Labour, Manpower,
Health and Population Planning
Pakistan Secretariat Block "C"
Islamabad

Dr Farhan Bakir
Professor of Medicine
Faculty of Medicine
Baghdad

Dr Amor Chadli
Director
Pasteur Institute
Tunis

Dr El Sayed Daoud
Director General of the National
Public Health Laboratory Services
Ministry of Health
Khartoum

Dr M.E.D.A. Al Kharadly
Dean
Institute of Medical Research
Alexandria

Dr K. Zaki Hasan
Professor of Neurology
Jinnah Post-graduate Medical Centre
Department of Neuropsychiatry
Karachi

ANNEX III

BIOMEDICAL AND PUBLIC HEALTH RESEARCH ACTIVITIES IN FOUR COUNTRIES OF THE EASTERN MEDITERRANEAN REGION

2o September - 29 October 1976

by

Professor N. Ansari
Professor E. Aujaleu
Professor M. L. Dowidar
Professor J. Kostrzewski

The first part of the report of the Mission, FM/Reg.Ad.Com.Bio.Res./2 EM/RSR/2, issued in February 1977, as amended by the Meeting, is given below:

" INTRODUCTION

1. Purpose of the survey - Terms of reference

The Regional Director for the Eastern Mediterranean of the World Health Organization assigned a team of four consultants to undertake a survey in Egypt, Iran, Iraq and Sudan of:

- all facilities available in these countries for implementation of biomedical and public health research programmes;
- research activities being conducted by these countries;
- the possible ways of promoting these facilities and activities within the context of regional priorities.

2. Composition of the team

The team was made up of:

- Professor N. Ansari (Honorary Professor of Teheran University) former Chief, Parasitic Disease Unit, WHO Headquarters);
- Professor E. Aujaleu, Honorary Director General, National Institute for Health and Medical Research, Paris;
- Professor M.L. Dowidar, Professor at the Faculty of Medicine, Alexandria, former President, University of Alexandria;
- Professor J. Kostrzewski, Professor of Epidemiology, Secretary, Medical Section, Academy of Sciences, Warsaw, Poland.

3. Place of the survey in the decentralization of biomedical research

This survey is a part of a series of activities undertaken by the WHO Regional Office, following a decision made by the World Health Assembly[1] to regionalize WHO research activities. This decentralization is not new, but it is now being given predominance in the overall research activities carried out by WHO. Indeed, although the Eastern Mediterranean Region - like other WHO Regions - so far did not have a specific biomedical research programme, many WHO projects in the Region have a substantial biomedical research component.

[1] Resolution WHA27.61, May 1974

An Advisory Committee on Biomedical Research, which met for the first time in 1966, was convened again in April 1976 and invited to consider the current biomedical research problems in the Region. The Committee defined the regional priorities in this field and submitted a series of recommendations to the Regional Director[1]. One recommendation was that as complete data as possible be collected on institutions of the Region engaged in biomedical research (including public health research) as a prerequisite to the elaboration of a specific programme. This information would be provided through completion of a questionnaire approved by the Committee and surveys by the Regional Office staff or consultants, hence the assignment covered by this report.

4. Justification for selection of the countries visited

Although the questionnaire was sent to all countries in the Region, it was not possible, at least in the initial stages, to send consultants to all countries and a choice had to be made. Countries suitable for field surveys were selected, on the one hand, on the basis of known research work or presumed activities, bearing in mind the quality of their institutions and, on the other hand, with a view to providing a valid sample of countries with the necessary facilities for implementation of research programmes. Thus, the conclusions reached by consultants as a result of their visits could be applied to similar countries, with modifications suggested by their answers given to the above-mentioned questionnaire.

---

[1] Report of the meeting of the Regional Advisory Committee on Biomedical Research 6-8 April 1976, EM/RSR/1

It should be noted that a visit made to Pakistan in April 1976[1], in connection with a closely related subject, had already made it possible to collect information on the most important health research institutions in that country, thus making a further visit unnecessary. Other countries with sizeable research facilities were not selected at this stage for circumstantial reasons, but could be visited at a later date.

5. What is meant by biomedical research?

The biomedical research terms used in this report for simplicity's sake should be understood as defined by the Executive Board and the World Health Assembly, that is encompassing biomedical research proper as well as epidemiological research and public health research (operational research).

During the survey, it appeared impossible and unnecessary to make a distinction between basic research, predominantly biological, and applied research, including clinical research, epidemiological research and research in public health, because the borders between these research categories are extremely imprecise. It could even be said that all research activities in which we should be interested are applied research. It seemed more appropriate to use the following terms: biological research (medically oriented), clinical and epidemiological research (also including laboratory tests) and finally public health research.

---

[1] WHO mission to Pakistan regarding collaboration in health research and training, April 1976, Bergstrom, Abdussalam, Arif and Wilson.

6. The scope of the survey

There exists a programme of research in educational planning and technology as applied to the training of health workers, in several countries visited which is regularly and carefully evaluated. Thus the team believed it was unnecessary to enter into detail about this important aspect of biomedical research.

PART I CONCLUSIONS AND RECOMMENDATIONS FOR FORMULATION AND IMPLEMENTATION OF A REGIONAL BIOMEDICAL RESEARCH PROGRAMME

I INFORMATION NECESSARY TO ENABLE THE REGIONAL OFFICE TO WORK OUT A REALISTIC REGIONAL BIOMEDICAL RESEARCH PROGRAMME

The World Health Assembly decided to decentralize the research activities of the Organization because it felt that biomedical research work should be done to the fullest possible extent in countries where the working material is found, that is to say where the problems to be solved arise, and by persons faced daily with these problems.

The Regional Office should, therefore, collaborate with countries of the Region in developing a programme designed to solve the major problems they face, which could be implemented with the means at their disposal, with additional assistance from WHO, as appropriate.

To establish a programme and ensure its implementation, the Regional Office must know:

- all possible national resources that can be harnessed for biomedical research;
- the priority problems to be solved, i.e. the regional research priorities;
- what areas to assist to ensure implementation of the programme.

Although the time was short and the programmes of visits, arranged by host governments differed from each other, nonetheless all the research programmes were mentioned in each country to the team; still the team has tried, on the basis of findings in the four countries visited, to review these three categories of data singly in the following three chapters.

II GENERAL CHARACTERISTICS OF BIOMEDICAL RESEARCH IN THE FOUR COUNTRIES VISITED

The second part of this report gives details of findings in each country surveyed and conclusions reached for each institution and country visited, for ease of reference. The overall conclusions derive from these findings are indicated below.

1. The four countries are aware of the value of medical research at government and university levels. Goodwill is obvious everywhere and the development of research activities is only limited by constraints which vary from country to country.

2. Because scientific research in general and biomedical research in particular are recent developments, there is not yet a good overall administrative and technical infrastructure on which research can be soundly based. Save for Sudan, which in this respect is more advanced than the other countries, at least as regards concepts if not in practical applications, the research policy has not beendefined precisely, national priorities are not established or remain vague and are not impressed upon research workers, national research plans have not been drawn up and co-ordination leaves much to be desired. However, positive activities are being taken in this direction in Egypt and Iran.

In the four countries, careful evaluation of research activities is lacking.

However, with the exception of Iran where, out of the very large number of research activities undertaken some are unrelated to the country's needs, research work is directed, if not always towards priority problems, at least towards problems of direct interest to the countries.

3. The participation of the Ministry of Health in the decision-making process concerning biomedical research as well as in organization and implementation of research activities varies a great deal. Almost non-existent in Iran and Iraq, it is more satisfactory in Egypt and the Sudan. Even in the latter two countries, university research, the most important activity, is to a large extent free of Ministry of Health control, probably because medical faculties are not under its authority. This is a serious deficiency. Biomedical research is aimed at improving preventive and curative services and eventually meeting needs which the Ministry of Health is in a position to know better than anyone else.

4. Laboratory research activities presenting some interest can only be undertaken on two conditions: availability of qualified research workers and well equipped laboratories. This is very often the case in Iran and in a number of Egyptian institutions, but not in the Sudan nor, with one exception, in Iraq. In many laboratories, what is called research is often nothing other than somewhat sophisticated routine examinations. There is no doubt, however, that an enormous amount of useful data could be obtained from these materials if a proper design of data collection and analysis could be introduced under the supervision of a research-minded person.

A lot of interesting clinical research work is done in Egypt, and to a lesser extent, in Iran. Clinical research activities do not appear to be carried out regularly in Iraq or in the Sudan. However, extensive research on mercury poisoning in Iraq could be cited as an interesting example.

In general there is not much epidemiological research in the strict sense of the term which is altogether different from a mere listing of cases, In this field, some research is done in the Sudan, more in Egypt and still more in Iran.

Drug research is also unevenly carried out in the Region. This research is an essential element in biomedical research programme contributing to better health standards by improving therapy. It also helps to avoid unwarranted hazards resulting from side effects of improper use of drugs. It helps to rationalize drug use. Moreover, new disciplines in this field, especially clinical pharmacology, should be encouraged through training and research. Furthermore, research in pharmaceutical quality control is essential to ensure the efficacy and safety of pharmaceutical preparations. Research on medical herbs and other traditional drugs should also be included and receive proper attention as part of drug research.

Field research is generally concerned with epidemiology, the effects of environmental conditions on health and organization of health services. In Iran, special consideration is given to research on organization of medical care. In Egypt, field research is concerned mainly with schistosomiasis and environmental factors and sometimes the problems of organization of medical care. Much the same kind of work is being done in Sudan, all things considered.

However, public health research activities are not as extensive as desirable at a time when all countries are conscious of the need to develop preventive and curative services best suited to local needs and covering the entire population. Unlike the health services, the responsible authorities in the field of research are reluctant to consider research in public health organization as an integral part of biomedical research. Of course, some professors of public health in the medical faculties are convinced of the need for such research activities, but they are not always listened to and followed.

Excellent research work on the production of sera and vaccines is done in Egypt and Iran. Research on the possible therapeutic action of local plants has been undertaken in Iran and Egypt and is starting in Sudan. In view of the amount of funds and the number of research workers required to obtain results in this field, the chances of success are small, unless major firms start showing interest in this research.

Finally, the excellent research work in medical pedagogy undertaken in Shiraz, Iran and Alexandria, Egypt is worth mentioning as well as the interest, perhaps more theoretical than really deep, shown by the four countries in field training for medical students.

On the whole, in Egypt and Iran, activities which can be considered as genuine research work are of a satisfactory and sometimes high level.

5. The problems of personnel vary from country to country, except for those concerning laboratory technicians and assistants and the staff (engineers and technicians) capable of ensuring the maintenance of equipment, which are common to all countries. The situation, which is largely due to the competition between firms in countries being rapidly industrialized, considerably hampers the development of biomedical research. It calls for urgent solutions both as regards the level and standardization of training, and salary scales.

The shortage of qualified researchers is acute in Sudan due to the small number of physicians and the need to use foreign institutions for post-graduate training, which is expensive and entails the risk of a "brain drain". It is also acute in Iraq for similar reasons, to which a lesser propensity of physicians for doing research should probably be added. The now wealthy Government of Iraq is trying to facilitate the return of Iraqi scholars living abroad, but so far seems to have met with little success.

The large number of physicians and biologists holding post-graduate diplomas in Iran, and particularly in Egypt, should make it easy for these countries to staff their research institutions with qualified research workers. This is not always the case. Inadequate staffing is due to several reasons: the low remuneration in public services and universities in comparison with current earnings in private practice or offered in a number of foreign

countries; the appeal of countries which, without giving much higher remunerations, offer much better working conditions; and finally the teaching duties of university research workers which prevent them from devoting enough time to research (it is generally estimated that between 10 and 15 per cent of total activities is devoted to research and the situation is still worse when professors work on a part-time basis, which is frequent).

Yet, it is excellent that teaching and research activities, which are complementary, should be entrusted to the same persons, and the solution to the foregoing serious problem should be found in increasing the number of teachers rather than in creating a separate corps of research workers, at the present stage of development of research in the countries of the Region.

In all countries of the Region, there is a lack of qualified epidemiologists, statisticians, research planners and administrators, as well as specialists in human sciences, who would be able to participate in public health research.

6. The training of future research workers, which requires good post-graduate training and training periods in research institutions, is only possible at present in Egypt and Iran. Egypt is also offering courses of three to nine months viz: mathematics, statistics, the use of computers, epidemiological techniques, establishing protocols and writing articles, practice in discussion, etc.

The facilities offered by these two countries could be used by the others in preference to training in distant countries which should be kept for very high level courses for people already qualified. This system would have at least two advantages: a training nearer to the problems of the Region and less risk of "brain drain".

7. The equipment in research laboratories varies naturally in accordance with national resources. In general, Iran has numerous, elaborate and ultramodern items of equipment. In Egypt, with a few exceptions, equipment is much simpler and, in some cases, mediocre. In Iraq, it is far from uniform - dilapidated and very modern equipment being found. In Sudan, laboratory equipment is generally very poor.

All four countries have great difficulty in installing the more complex apparatus, maintained and repaired due to lack of qualified personnel as indicated in point II.5 above. The situation is a little more favourable in Iran because suppliers' after-sale service is better organized; however, such services usually do not extend beyond one year following acquisition of equipment. There is a great need in each country to establish maintenance and repair workshops, whose activities could be extended to the whole range of scientific equipment used for research and industry. A mobile service common to several neighbouring countries could also be envisaged, which would be responsible for maintaining and repairing complex

laboratory apparatus, provided it is somewhat uniform. Finally, firms which are confident of a certain market could themselves undertake the training of maintenance personnel.

8. The availability of basic data is not uniform in the four countries visited. Even where good data do exist, they are not properly used for decision making. In order to derive the greatest benefit from expenditure on national health services and scientific and technological activities an adequate data base correctly collected and kept up-to-date is essential.

9. All researchers tend to think that research funds are insufficient. This is certainly true in Egypt and the Sudan, even taking into account the substantial funds from foreign sources or international organizations. More funds would raise the level of research, particularly because laboratories could be better equipped and probably certain categories of research personnel be better paid, in indirect ways. It is not sure that research funds are insufficient in Iraq where fewer people are capable of utilizing them. On the other hand, in Iran, where considerable funds and numerous institutions are available, the users themselves believe that many research centres could not make profitable use of an increase in their allocated funds and certain centres do not request all that they could obtain because they are conscious that money is not everything in research.

10. Everywhere difficulties are encountered in publishing research. Local scientific journals are not always of a high level, their publication is irregular and their distribution limited. Great difficulties are also encountered in communications between scientific centres within a given country and with foreign centres, and in obtaining proper library services.

It is noteworthy that efforts are generally being made to organize good medical libraries. Iran has taken a remarkable initiative which could be useful to all countries in the Region.

11. A number of institutions are of such quality that they could be selected and helped to become centres for teaching or research and be used to the advantage of the whole Region. Those which seem appropriate for such a role are:

- In Iran: the School and Institute of Public Health, Teheran
  the Razi Institute, Teheran
  the Cancer Institute, Teheran
  the Food and Nutrition Institute, Teheran
  the Regional Institute of Mycotoxins, Isfahan
  the Pahlavi University, Shiraz, for leishmaniasis and intestinal lymphomas
  the Library of the Imperial Centre of Iran, Teheran
- In Sudan: the School for Technicians, Khartoum

Long training is needed for fundamental biological research, as well as highly sophisticated equipment and multidisciplinary teams in which the physician must work in collaboration with specialists from other scientific disciplines. It also requires practically full-time devotion from research workers. It can only be carried out successfully with substantial funds. These requirements are difficult to meet at present, and even for the next few years, in the institutions of the Region. Fundamental biological research is also long-term research, with no immediate or rapid effects on the solution of health problems. Save in exceptional cases, the Regional Office should not concentrate its efforts, at least initially, on such research. However, it could prepare for the future by assisting the training in laboratories of very high level young research workers, who would be able and willing to devote themselves to this research, which is particularly difficult and impersonal.

On the other hand, research of a more practical character, including laboratory research, clinical research and organization of health services, should receive priority, on condition that this is truly research. It appears from the survey that the term is often misused, probably due to its inherent prestige.

With regard to laboratory research, it is necessary to distinguish between true and innovative research with well-defined objectives properly directed towards the most important health problems and work which is purely routine, even though

sophisticated, or which is merely repetition, supposedly to prove something successfully proven in many institutions.

Again, it is not possible to call simple observation of a limited number of clinical cases "clinical research", as is too frequently done.

Epidemiological and biostatistical research is of special importance to the Region because it is indispensable for making a correct evaluation of the health status and morbidity and identifying areas on which the most useful research work and the efforts of health services should be concentrated. But this research cannot be summed up as a more or less exact compilation of identified phenomena. It should be conducted rigorously not only as regards the definition and collection of data but also their utilisation.

Finally, in the field of health care delivery and training of relevant personnel, which is the "priority of priorities" as the solution of these problems is vital for the Region, the simple development of a basic health services or primary health care network cannot be considered research, if these services are only providing medical care. Such an activity is indispensable, but it does not per se advance knowledge in the area concerned, just as routine laboratory examinations do not of themselves constitute research.

The Regional Office should only provide assistance under the heading of research to those services in which health care delivery is combined with genuine research activities including:

- comparative trials and as scientific an evaluation as possible of methods and categories of personnel to determine those which are best suited to the local conditions and the population involved;

- epidemiological research utilizing the existing sound knowledge of demographic and health problems of the population covered by these services and of their availability;

- study of attitudes of people to health and disease;

- based on this epidemiological research, alerting those responsible for research and particularly academic authorities to the most important health problems, which are not always those derived from observation of in-patients;

- trials and evaluation of prophylactic and therapeutic methods;

- identification of the best field training methods for health personnel of all categories, including physicians.

IV THE PRINCIPAL AREAS ON WHICH THE REGIONAL OFFICE COULD CONCENTRATE ITS EFFORTS

The WHO Regional Office can play a catalytic, fostering or stimulating role in the field of biomedical research. It can provide assistance in the form of advice and information, services of experts and consultants, fellowships, supply and maintenance of equipment and by the regional or international co-operation and co-ordination justifiably emphasized by the Regional Advisory Committee on Biomedical Research at its meeting in April 1976.

The Regional Office can judge best how its assistance should be given and does not need a reminder. However, it can be guided usefully by indicating, in the light of findings in the countries visited, the principal areas, within the context of the aforementioned regional priorities, on which it could concentrate its efforts with maximum efficacy, without suggesting what action should be taken.

1. Approaching the governments to encourage them, by stressing the advantages of the measures recommended, and help them, as appropriate, to:

- develop an overall administrative and technical infrastructure for biomedical research;
- define a national research policy;
- identify the major health problems and set a limited number of clear-cut priorities, as compelling as possible,

and allocate only a small proportion of funds to any interesting research activities outside these priorities;

- draw up a national research plan in the light of the policy adopted, priorities and available resources;

- develop a mechanism for co-ordination of research activities on a country-wide basis and at the level of research institutions;

- carry out evaluation of the research undertaken;

- encourage all countries of the Region to use institutions which have the necessary potential to become centres for teaching or research (a list of these establishments is given in II.10).

- promote and support, as appropriate, co-ordinated research projects concerning problems of common interest to several countries, such as schistosomiasis, trachoma, nutrition, organization of health services, etc.;

- draw up and finance, at least partly, a regional research plan distributing the various programmes in this plan between institutions best equipped to implement them, co-ordinate and supervise operations and evaluate results.

V FINAL CONCLUSION

The writers wish to state their general conclusion which may be expressed in the following manner:

There is in the Eastern Mediterranean Region a sound basis forthe development of biomedical research. In some cases, a small amount of money would suffice to raise the level and efficacy of research work already undertaken appreciably and widen the scope of this research. In other cases, a greater financial input would be needed because there are some difficult problems. But progress is possible everywhere. In all cases, the money spent on biomedical research in the Region, if judiciously employed - and the Regional Office can ensure this - will eventually bring, often quite rapidly, a definite improvement in the state of health of the people in the Region. In addition, research needs encouragement and the research workers should be encouraged to devote themselves to research through moral support and other financial and welfare mechanisms. Further more, the evaluation of research activities must be an essential part of the research. Special attention should be given to the training of research workers and the clinical staff. Finally, research activities should follow research programming exercises as part of or preliminary to any organized format of research priorities.

The writers trust that this conclusion, which reflects their deep conviction, will help the Regional Director to find the voluntary funds indispensible to carry out the task in which he is engaged successfully".

ANNEX IV

COLLABORATION IN HEALTH RESEARCH AND TRAINING IN PAKISTAN

4 - 10 April 1976

by

Professor S. Bergstrom
Dr A. Abdussalam
Dr R. Wilson
Dr A. Arif

The assessment and recommendations made by the Mission are summarized as follows:

1. Assessment

The Planning Commission of the Government of Pakistan has developed a "Development Perspective (1975 - 1980)", which includes an ambitious programme to increase the delivery of primary health services to 50 per cent of the population from the present 15 per cent. The document contains a " proposed outline for the utilization of activities of medical research" in ten areas:

- utilization of existing results of research
- long-term programme of basic biomedical research
- malaria
- tuberculosis
- infectious diseases of childhood
- parasitic infections
- nutritional disorders
- gastro-intestinal diseases
- diabetes
- hypertension,

but does not rank the activities in order of priority, nor relate them to proposed plans for increased delivery of primary health services.

The Pakistan Medical Research Council has proposed a five-year programme of research which includes: nutritional disorders, infectious diseases, community medicine, chronic diseases and others, and recommends recruitment and training of twenty-seven additional researchers and a rather optimistic time-phasing for research activities.

While the Council tries to co-ordinate research activities, institutions visited by the mission appeared to have their own series of research activities related on the whole to problems in Pakistan, although it was difficult to relate the resources allocated to research to the countries' health priorities. The majority of research activities

seemed to focus on laboratory studies or clinical investigations, with some lesser emphasis on epidemiological research, with little research on delivery of health services.

Shortage of trained manpower is the major difficulty facing health research in Pakistan. For a number of reasons, including the national career and salary structures and the relative attractiveness of clinical practice, the likelihood of bringing a substantial number of qualified biomedical scientists into full-time or major part-time health research seems remote. The opportunity offered by the developed nations and the rapidly developing oilrich countries to Pakistan professionals of all types is another major reason for the shortage of research scientists in Pakistan.

Financial support for health research is modest. The Council received approximately US $ 145 000 in 1975 for operating costs of the Council Secretariat and research grants to investigators. Some research projects are funded from US PL-480 funds, while others are supported from general operating budgets and private countributions. The five-year programme proposed by the Council would cost in total approximately US $ 800 000, with annual recurring costs estimated at $ 150 000. The long-term prospect of continued US PL-480 funding or of funding research from other bilateral sources seemed poor. Possibility of funding of research through collaborative international programmes supported through multilateral and bilateral sources appeared more reasonable.

Pakistan health researchers collaborate with WHO's centres for infectious diseases and in research and training activities in rural sanitation and water supply by exchange of biological specimens, scientific information and manpower. These collaborative efforts could become components of international research programmes. The National Health Laboratories in Islamabad were designated in October 1975 as an official WHO collaborating centre for training and research in tropical diseases.

2. General recommendations

The Mission recommended that the research activities should be co-ordinated with the health care priorities in the "Development Perspective (Health) (1975-1980)" and that the Medical Research Council should prepare a national health research programme and budget accordingly.

It recommended that the administration of the Council be moved to Islamabad and that the Council be strengthened by addition of a systems analyst, health economist, epidemiologist and social scientist, in order to assume leadership of research planning and activities.

It was further suggested that the Council, while maintaining liaison with the Ministry of Science and Technology, should be placed under the responsibility of the Ministry of Health.

Other recommendations concerned: development of research manpower and a proper career structure for them; co-ordination of

ongoing health research and training activities; limiting of inter-regional and international research to health problems of national importance and review of bilateral and multilateral assistance to research by the Research Council; development of resources, such as the Institute of Public Health Engineering Research, Lahore, as international research and training centres.