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REPORT
ON THE
EASTERN MEDITERRANEAN REGIONAL ADVISORY COMMITTEE
ON BIOMEDICAL RESEARCH

FOURTH MEETING

Tunis, 10-13 September 1979

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

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I INTRODUCTION

The Fourth Meeting of the Eastern Mediterranean Advisory Committee on Biomedical Research was held at the Salah Azaiz Institute, Tunis, from 10 to 13 September 1979. It was attended by the members of the Committee, WHO staff members from the Regional and Geneva Offices and resource experts. A list of participants is given in Annex I.

II OPENING OF THE MEETING

The Meeting was opened by H.E. Mr Fouad Mebazaa, Minister of Public Health, Tunisia. Mr Mebazaa, in his address, emphasized the importance of medical research in developing a rational infrastructure for health care delivery suited to the needs of each country. This was essential for effective control of communicable diseases and for dealing with other pressing health problems. He noted that such important subjects as a Medium-term Programme of Research Development, problems of malnutrition and traditional medicine were on the agenda of the Meeting.

In welcoming the Committee to Tunis, he assured the Regional Director and the participants of the whole-hearted support of his Government to all efforts for the promotion and protection of health in the countries of the Region.

Dr A.H. Taba, Director, WHO Eastern Mediterranean Region, in his opening address (see Annex II) welcomed the participants to the Meeting, and expressed his appreciation for the contribution made by the members whose term expired this year. He was grateful to H.E. the Minister of Public Health, Tunisia, for hosting this Meeting and to Dr Mourali for his assistance in making arrangements for holding it in the Salah Azaiz Institute.

Dr Taba, referring to the agenda, pointed out that, since the last Meeting, substantial progress had taken place in the various research projects being sponsored by the Eastern Mediterranean Regional Office, particularly in the field of Health Services Research (HSR), which has been assigned a high priority by the Committee. Members would be informed of the progress of studies related to drug utilization, oral rehydration and traditional medicine.

Malaria and malnutrition were major health problems in most of the Member States of the Region, and, therefore, regional programmes for research in these two fields had been prepared and would be presented to members for their consideration and comments. Dr Taba added that the Committee would also be hearing about the research component of an important health development project in the Sudan, related to the control and prevention of water-associated diseases.

Following the Organization's Sixth General Programme of Work, a Regional Medium-term Programme for Research Promotion and Development had been prepared, and he hoped that, in it, due attention could be paid to the various possible activities which the Regional Office could support to strengthen national capabilities for undertaking research.

Finally, Dr Taba requested the members to discuss, during the coming days, among other things, ways and means by which they themselves could help to develop the Region's medical research programme.

III ELECTION OF OFFICERS AND ADOPTION OF AGENDA

The following officers were unanimously elected:

Chairman	Dr N. Murali, Director, Salah Azaiz Institute, Tunis;
Vice-Chairman	Dr N. Ansari, Emeritus Professor, University of Teheran, presently in Richelien/Verseix, Switzerland; and
Rapporteur	Dr M. Abdussalam, Pakistan, presently Director, International and Scientific Cooperation, Institute of Veterinary Medicine, Berlin.

The agenda was approved (see Annex III).

IV TECHNICAL MATTERS

1. Health Services Research Activities (Agenda item 4a)

The Committee was informed about the various training and research activities supported in the Region in the field of HSR during the last year. These include: the Pre-Course Workshop held in Cairo, 25 September - 1 October 1978; the Regional Orientation Course on HSR held in Alexandria, 3-19 January 1979; and the National Workshop held in Islamabad, 7-12 April 1979.

The participants of the Pre-Course Workshop, together with four faculty members of the Orientation Course, developed a detailed curriculum, as well as criteria for the selection of participants to attend the Course. On their return to their countries, the Workshop participants assisted in the selection of participants for the Orientation Course. They also guided the nominated participants to select an HSR topic for which a proposal could be developed during the Orientation Course.

The main activities which contributed to the success of the Orientation Course were as follows:

- (a) Involvement of top personnel responsible for research from the participating countries in developing the Course, selecting the participants and assisting in the selection of research topics relevant to the HSR priorities of their countries;
- (b) the adoption of a practical approach to teaching, rather than a theoretical approach;
- (c) the involvement of the participants in thoroughly pre-designed field research;
- (d) the commitment of WHO EMRO to assist accepted proposals, developed by the participants during the Course, and which could be implemented in a 6-month period (the amount of assistance was defined as equivalent to US \$10 000 for each proposal);
- (e) the group dynamic and participative approach by the faculty members; and
- (f) the multidisciplinary nature of both the participants and the faculty members.

Experience gained in conducting the National Workshop on HSR in Islamabad demonstrated that:

- (a) It was possible to orient a relatively large group of high calibre personnel to HSR in a relatively short time;
- (b) Workshop design should aim at supporting existing national efforts in HSR and benefit from active nationals to develop a core of health services researchers in various institutions;
- (c) it was important to use national case studies as the main impact in such a Workshop, the role of the faculty members being to reinforce the positive aspects of the cases and suggest improvements on the methodology, if necessary;

- (d) faculty members should avoid the presentation of unnecessary high-powered quantitative research methodologies which are liable to create frustration in health professionals who are not familiar with social science research methodologies;
- (e) field study being an aid to reinforce learning, the addition of such a component to the Workshop would have added to its success; and
- (f) it was essential to follow-up the proposals developed during the Workshop, as well as to provide technical assistance in the early stages of design and implementation.

The experience gained from both the Orientation Course in Alexandria and the Islamabad Workshop on HSR showed:

- (a) the need for thorough preparation of topics selected for research proposals by participants in orientation courses, including pre-course national workshops (assisted by WHO) in which candidates for orientation courses and WHO Programme Coordinators developed basic materials needed for research proposals;
- (b) the need to develop a standardized training module;
- (c) the need to follow-up national workshops after the orientation courses; and
- (d) the need for technical assistance in the initial stages of design and implementation of research proposals, especially through visits of WHO consultants.

It was felt that while social, behavioural and other scientists should be actively associated with HSR activities, the physician should take overall responsibility for such studies. This would also maximize the chances for the results of such studies to be implemented.

Considering the action-oriented nature of HSR, and the need to link the training activities in this field with the actual conduct of research, the Committee members were informed of the progress of the study to assess effectiveness of health services at the primary care level in the EMR countries, and an outline of the protocol was presented to the Committee. This would be a collaborative study between three Member States (i.e., Bahrain, Egypt and Yemen), WHO EMRO and the Institute of National Planning, Cairo. A detailed protocol for this study, including the instruments to be used in the study, was under development at the INP. As the socio-cultural and

economic conditions in the three countries were quite different from each other, this comparative study should yield useful results which could be applicable over large parts of the Region.

It was well-known that there is a shortage of medical research workers in most countries of the Region. This fact underlined the urgent necessity of planning and establishing well thought-out training programmes suited to the needs of the Region. The trainee should be able to plan and carry out enquiries on various aspects of the health services and health care delivery. A follow-up of the trained persons, jointly with the training and utilizing agencies, should be a part of the system. Careful attention to career structure and job satisfaction was vital in order to hold the trained persons and to ensure their full contribution to the research programme.

The Committee expressed its satisfaction with the progress of research and training activities in HSR sponsored by the Regional Office, and recommended strongly that the Governments be urged to provide attractive and competitive career opportunities to research workers in this field as well as to other biomedical scientists.

The Committee was also informed of the HSR studies being carried out in EMR countries under the aegis of the WHO Special Programme of Research and Development and Research Training in Human Reproduction (HRP). These studies focussed on the use of different categories of health personnel to deliver family planning care. In Egypt, a 3-year study had been initiated to evaluate, as a pilot demonstration project, the use of nurse-midwives as providers of family planning care. Moreover, the study sought to identify client preference for different types of fertility-regulating mechanisms. This ongoing project also had a cost analysis component.

In Pakistan, the WHO/HRP was collaborating with the Government to evaluate the impact of supervisors (family welfare officers) on clinic performance in urban and rural settings. It was also intended to identify what modifications were required in the functions assigned to supervisors, their training and development. A cost effectiveness study was to be undertaken. Although the initial phase of this 3-year project had been delayed, it was expected to start shortly. In Pakistan, WHO

collaboration had also been sought for a phase IV field study to evaluate use-effectiveness and suitability of a new injectable contraceptive, Norigest, in urban and rural areas. Besides an assessment of these technical aspects, the study would determine requirements for the initial provision and continuous supply of the drug. In addition, service studies would evaluate the efficacy of staff training, patient management, referral and back-up services. This 2-year project was just getting underway.

2. Research on Alternative Approaches to Oral Rehydration (Agenda item 4b)

The EM/ACMR members were informed that the controlled trials of the effectiveness of oral rehydration in acute diarrhoea in children under the age of 3 years, had been completed in West Azerbaijan, Iran, and in Cairo, Egypt.

The results seemed to indicate that oral rehydration in mild and moderate diarrhoeal diseases of children under 3 years using Oral Rehydration Salts (ORS), the formula developed in South-East Asia and recommended by WHO and UNICEF, was feasible at village level. It seemed to be effective in producing speedier rehydration and recovery, as judged by weight gain. It would seem likely to reduce the need for referral to hospital, and to reduce case-fatality, but this was not yet proven and needed evaluation during wider-scale use. It certainly had a marked effect on nutritional status for at least 6 months after the episode of diarrhoea so treated, even though, in the present state of knowledge, it was difficult to explain why this should be so.

Information was given to the Committee on the recommendations of the Regional Scientific Working Group on Diarrhoeal Diseases dealing with research, i.e., studies to identify the groups at relatively high risk of morbidity and mortality, comparisons of different methods for the delivery of ORS, and techniques for identifying and isolating diarrhoea-causing agents.

The Committee members felt that while these studies on ORS had progressed very well, the Regional Office should consider further research studies on topics such as the nature and quantum of electrolyte losses in various types of infantile diarrhoea, with a view to exploring if ORS of different composition should be used, and the designing of appropriate methods for its delivery.

It was felt that aetiological studies should receive due attention, in order to check abuse and mis-use of expensive antibiotics. In this connection, training activities in the field of microbiological techniques for the detection of diarrhoeal agents should be supported by the Regional Office. These might be carried out in an appropriate centre in the Region, which could also be developed with a view to its serving as a Regional Reference Centre.

3. Drug Utilization Studies (Agenda item 4c).

The Committee was informed about the progress of the drug utilization studies being carried out in the Sudan and Democratic Yemen. It was recommended that these studies be finalized at the earliest, so that the results could be presented for review to the EM/ACMR at its next meeting, together with suggestions for extending these studies in other countries.

The Committee members, while emphasizing the importance of the drug utilization studies, appreciated that the whole subject of drugs was quite complex, and susceptible to social and political influences. In order to facilitate work in the subject, it was desirable that necessary expertise in clinical pharmacology be developed in the countries of the Region.

The members felt that information on availability, cost, distribution and utilization of drugs should be included in the three-country study to assess the effectiveness of health coverage at the primary care level.

4. Research in Traditional Medicine (Agenda item 4d).

Following an earlier recommendation of the EM/ACMR, a regional research programme for promoting and developing traditional medicine has been developed. Its objectives are to collect baseline information on traditional practitioners, and their practices, and to promote their utilization in the delivery of health services, especially in primary health care.

As an initial step, a questionnaire for the collection of baseline information on the subject was distributed to selected potential national research workers and to authorities concerned in 20 countries of the Region. Completed questionnaires had been received from Afghanistan, Democratic Yemen, Djibouti, Egypt, Iran, Kuwait, Oman, Pakistan, Somalia, Sudan and Tunisia. Attempts were being made to collect

further information in some countries. The findings would be analyzed, processed and presented to the First Workshop, scheduled to take place beginning of next year. As an outcome of this Workshop, micro-case studies of specific areas on traditional medicine in selected countries would be undertaken and the results would be discussed in another meeting, to be held later.

Based on the findings and recommendations emanating from country studies and regional meetings, it was hoped that a realistic and practical programme would be developed for the effective utilization of potential resources in traditional medicine for the extension and promotion of health care.

Some of the key issues involved in the research and development effort in traditional medicine were:

- (a) The nature of the organizational relationship between the conventional and traditional systems of medicine in the socio-economic background of various countries;
- (b) to whom traditional practitioners were to be responsible and accountable; and the official regulation of their work;
- (c) scientific/objective evaluation of the various traditional substances/medicines and practices with a view to identify agents which are harmful and potentially toxic;
- (d) content of training programmes for traditional practitioners, with a view to utilizing their services at the primary care level; and
- (e) factors which determined when a person who was sick or otherwise solicit the attention of a traditional or a modern practitioner.

The Committee members endorsed the approach being adopted by the Regional Office in the development of a research programme in traditional medicine and emphasized that it should remain relevant to the main purpose of rational utilization of traditional practitioners in the delivery of health care.

5. Directory of Medical Research Institutes in the Eastern Mediterranean Region
(Agenda item 4e)

Information was made available to Committee members on the current status of the Directory of Medical Research Institutes in the Eastern Mediterranean Region. Out of the 229 institutions listed in the Directory, a detailed profile was available on 85.

It was recommended that, in view of the importance and usefulness of the Directory to medical research workers within and outside the Region, it should continue to be updated every three years.

Members of the Committee should taken an active part in obtaining information from institutes in their respective countries which have not supplied the requisite information earlier.

6. WHO Collaborating Centres in the Eastern Mediterranean Region (Agenda item 4f)

Information on the names and functions of the 34 WHO Collaborating Centres in the Region was presented to the Committee, together with the criteria for selection of institutions for such designation.

It was pointed out that the role of these Centres in meeting the needs of WHO with respect to expert advice and to carrying out technical activities of WHO was currently being examined by a working group established by the Executive Board, as part of a broader study. This study was expected to be presented to the World Health Assembly next year.

The Committee was of the opinion that the world-wide network of WHO Collaborating Centres played an important role in the WHO Research Programme. The Centres could render invaluable assistance to research workers in the Region by providing consultation, standardized reagents, reference services and training. They should therefore continue to be selected with utmost care and should be assisted by WHO in maintaining their capabilities. The criteria already laid down for this purpose were suitable, but some Centres in this Region might need strengthening by WHO to fulfil them. The Committee felt that the Regional Office should develop a mechanism for keeping the work of the Centres under review, in order to assure the high level of their activities. (This aspect may be covered in the Executive Board study which is in progress).

Recognizing the paucity of institutions in the Region which presently have the potential to serve effectively as Regional Research and Research Training Centres in the fields relevant to the health problems of the Member States, the Committee recommended that WHO/EMRO should provide continued and sustained assistance to selected Centres in the Region in order to develop their capabilities for possible future recognition as WHO Collaborating Centres.

7. Review of the Reports of the 20th Session of the Global ACMR and its Sub-committees (Agenda item 5)

A summary of the Reports of the 20th Session of the Global ACMR and of its Sub-committees was presented. Coordination between the Global and Regional ACMRs was being effected through the attendance of Chairmen of Regional ACMRs at Global ACMR meetings and the Chairman of the Global ACMR at Regional meetings.

The Committee, while taking note of the report of the ACMR Sub-committee on Information, was informed that the use of the Eastern Mediterranean Regional Medical Library in Teheran had been steadily mounting, until just before its operations were temporarily suspended. However, health literature services had continued to be provided, albeit at a lower level, through collaboration with the US National Library of Medicine and the principal European biomedical information networks.

The Committee members, while expressing their appreciation for the efforts of the Regional Office in providing health literature services to scientists in the Region, felt that it was still necessary to further disseminate information about this service amongst the scientific community in the Region.

Information about the Quarterly Bibliography on the Six Tropical Diseases, now being distributed by TDR in collaboration with the US National Library of Medicine was made available to the Committee.

8. Review of the Activities of the Special Programme for Research and Training in Tropical Diseases (TDR) (Agenda item 6a)

The Committee took note of recent developments in the Special Programme for Research and Training in Tropical Diseases, especially in the field of leprosy and filariasis (onchocerciasis). In the former, much progress had been made towards the development of vaccine and immunodiagnostic agents. In the latter, the emphasis was on chemotherapy, using an animal model.

The involvement of scientists belonging to the endemic countries including those in the Eastern Mediterranean Region had been slow to develop. However, with the efforts of TDR's Research Strengthening Group activities, it was expected that these

will increase in the near future. In the first year of the operation of the programme (1975), only 13% of the funds were awarded to investigators in developing endemic countries, but, by 1978, they had risen to 52% of the total awards.

The Committee was informed of the activities of the other WHO Regions in developing Tropical Disease Research. TDR activities were in the process of being expanded in this Region, the Committee members and the Regional Office were requested to stimulate and to encourage scientists and institutions in the Member States of the Eastern Mediterranean Region to participate in this Programme.

9. Establishment of a Regional Panel on Parasitic Diseases and the proposed Meeting of the Scientific Group on Liver Diseases (Agenda item 6b)

The Committee was informed that the Regional Director had decided to establish a Regional Advisory Panel on Parasitic Diseases.

This Panel would concern itself with schistosomiasis, filariasis (onchocerciasis), trypanosomiasis, leishmaniasis and other parasitic diseases of importance to the Region, excluding malaria, for which a separate Panel was already in existence.

It was proposed to convene a Scientific Group Meeting on Parasitic Diseases, with participants drawn from the above Panel, in the near future. The objectives of this Meeting would include promotion of research activities in parasitic diseases in countries of the Region, including better utilization of facilities and potentialities of the Special Programme for Research and Training in Tropical Diseases, within the Region. It would also advise on the formulation of research projects which could be undertaken in the Region and would identify research centres for institution building.

In view of the importance of parasitic diseases in the Region, the Committee welcomed the establishment of a Regional Advisory Panel on these diseases. This should help to promote research and to strengthen inter-country exchange of knowledge for the control of these diseases.

The Committee also noted with satisfaction that the Regional Office was planning to convene a meeting of the Scientific Group on Liver Diseases in pursuance of an earlier recommendation (Report of the Eastern Mediterranean Advisory Committee on

Biomedical Research, Third Meeting, Alexandria, 27-31 March 1978). The Committee requested that the report of the group be made available at its next meeting.

10. The regional programme for field research in Malaria (Agenda item 6c)

The Committee noted that field research in Malaria was being pursued in the Eastern Mediterranean Region with a view to solving problems that were hampering the progress of anti-malaria programmes and to improving present tools and methodology of control.

The following priorities had been established in WHO/EMR Malaria Medium-term Programme, 1978-1983:

- (i) development, application and assessment of methodologies and techniques of control that preserved the integrity of the environment;
- (ii) establishment of a practical monitoring system of *P. falciparum* sensitivity to 4-amino-quinolines;
- (iii) trials with anti-malaria drugs;
- (iv) improvement of operational equipment and techniques of application of insecticides; and
- (v) identification of the most economical, and/or practical, methods of control (integrated approach).

Within each of the above priorities it was envisaged to support the following field research activities:

1. Biological control: utilization of local larvivorous fish as either the main measure or as a complementary measure for malaria control in different ecological situations (Afghanistan, Iraq, Oman, Pakistan, Somalia, Sudan and others to be identified).
2. Environmental management: promotion of community participation in the prevention of man-made malaria (Sudan, others).
3. Response of parasites to drugs: establishment of practical field monitoring systems of *P. falciparum* sensitivity to chloroquine, with particular emphasis on the application of *in vitro* techniques (Egypt, Iraq, Pakistan, Sudan and others). Training of national scientists for this purpose was also envisaged (Regional Course in Sudan).

4. Anti-malaria drugs: studies on cost-effectiveness of spraying as compared to mass administration of anti-malarials (Afghanistan); assessment of new drugs, such as Mefloquine (countries to be determined); assessment of *P. falciparum* response to pyrimethamine (Oman and others).
5. Equipment and insecticides: improvement of existing operational tools, and assessment of new ones (Afghanistan, Pakistan, Saudi Arabia, Sudan and others); trials of new formulations, and different rates and frequencies of application of residual insecticides (Afghanistan, Pakistan, Sudan, Syria and others).
6. Integrated approach towards malaria control: definition of optimal combinations of anti-malaria measures and methodologies that, in given situations, might lead to better results at lesser cost to the programme (Afghanistan, Somalia, Sudan, Syria and others).

The Committee was also informed of the relationship of the Global Programme of TDR and the research programme in Malaria within the Eastern Mediterranean Region countries. It was stated that the TDR work relevant to the Regional programme included basic studies on chemotherapy, immunology, including vaccination and immunodiagnosis, and biological control of vectors. Larger involvement of TDR in the malaria field research in the Region was envisaged in the coming years.

The Committee supported the continuation of the field research programmes along the lines proposed, and further recommended that training programmes to increase the competence of national scientists and technicians be encouraged.

11. Regional Programme for Action-oriented Research in Nutrition (Agenda item 7)

The attention of the Committee was drawn to the widening gap between some of the recent advances in knowledge and practical measures evolved on one side, and their application for nutritional amelioration and improvement on the other. While, in some countries, certain nutritional disorders had been controlled or eliminated, utilizing known techniques, the case had not been the same in others which brought home the fact that proven solutions for a given problem did not necessarily work out in all situations. Thus, there was a pressing need for stimulating and supporting research that would facilitate the implementation of action programmes, since nutritional disorders were still major health problems in the countries of the Region. While economic factors undoubtedly exerted an important influence in the causation of these problems, many of them could either be prevented or considerably mitigated even within the existing socio-economic restraints.

After a brief recapitulation of the endeavours of WHO, and EMRO, in this direction, reference was made to the recent renewed efforts in light of the opportunities that the new thrust towards primary health care had to offer. Mention in particular was made of the interest of the Global ACMR, and its sub-committee on nutrition, which identified five areas in which action-oriented programmes of research were considered of topical importance. These were related to the development and propagation of appropriate weaning recipes, based on foods normally available at home; studies on the interrelations between infections and nutrition to identify measures that would mitigate the adverse effects of one on the other; impact of maternal malnutrition and identification of action at community level to offset its adverse effects; development and application of methods for the prevention of nutritional blindness, anaemias, goitre, etc.; and, last but not least, strategies for the delivery of a basic health package with an effective nutrition component through primary health care.

While research in all the above five areas was considered relevant, it was felt that it would be better to concentrate in the coming years on such of those major problems as lend themselves to practical action, with appropriate adjustments in techniques. Twelve possible research proposals were outlined for consideration of the Committee, including seven directly concerned with methods for the control of protein energy malnutrition and the delivery of related services through primary health care; three directed to bring about nutritional improvement, through management of diarrhoeas and parasitic infestations; and two dealing with measures aimed at the rather extensive problem of anaemias, especially in women.

The group was then informed of the measures contemplated to develop the action-oriented research programme in the Region and was requested to comment and advise on the global, as well as the regional, programmes, on the relative priority of regional research activities proposed and to suggest any other programmes or activities considered important at the present juncture.

In the discussion that followed, several members commented on the importance of the proposed action-oriented research on nutrition, and added that it should be given high priority. Information was also exchanged on the current situation in some of the countries in relation to imported infant foods and village level efforts in the

development of weaning diets. The Committee supported the programme, reiterating the need to ensure that the research activities would be mainly service-directed. Also the need for associating behavioural, and other, scientists in relevant disciplines with the proposed scientific working group, as well as securing active involvement of its members in the research programme, where appropriate, was reemphasized.

12. The research component of the "Blue Nile Health Project", a comprehensive approach to the prevention and control of water-associated diseases in the Gezira Province, Sudan (Agenda item 8)

This project involved a 10-year effort for comprehensive control of malaria, schistosomiasis and diarrhoeal diseases in an agricultural community of over 2 million people along the Blue Nile River south of Khartoum. It was a cooperative project between the Sudanese Ministries of Health and of Irrigation, the Sudanese Gezira Board, which manages the agricultural operations, WHO/EMRO and other agencies. The budget required would be \$16 million per year, of which \$7 million was presently budgeted by Sudan.

In addition to control operations in the entire area, the Blue Nile Health Project had two research components: field research projects of one or two year duration; and operational research on a comprehensive strategy to be evaluated in a study zone. The applied research would include short pilot studies on the effectiveness of vector control by environmental measures, such as drainage and weed control in canals, on vector control by biological agents, on community participation programmes, and on innovative sanitation facilities. Other applied research would determine the varied requirements for health services among the 5 ethnic groups living in the area, would calibrate and verify simple cost-effectiveness models for selecting the trial strategy, and would evaluate the epidemiological impact of targeted chemotherapy of schistosomiasis.

The 5-year operational research effort among the 50 000 people in the study zone was an unparalleled opportunity to determine the economic benefits of disease control in a tropical irrigation system. The Sudan Gezira Board maintained detailed records of agricultural operations and yields for the cultivation of cotton and other

crops. By extending their monitoring system into the study zone, and by adding accounting and epidemiological monitoring, it would be possible to identify the costs and economic benefits of the comprehensive disease control strategy, and to classify control costs and benefits by disease. This information would be extremely valuable to health and agriculture planners working in endemic areas.

After the first year of operations, an annual seminar would be offered for agricultural, irrigation, hydroelectric and health planners on the results of the research. It should be especially relevant for countries in the Middle East, the Nile River Valley and the Sahel region.

The Committee agreed with the lines on which this study was being pursued and would like to be kept informed of its progress. The work was also directly relevant to the Organization's Tropical Diseases Research Programme, with which it should be closely coordinated.

13. Regional Medium-term Programme for Research Promotion and Development (Agenda item 9)

Though programming and budgeting within WHO were carried out on a biennial basis, the general work plans were formulated for a much longer period (i.e., 5-6 years), and were approved by the policy organs of the Organization. The most recent of these (i.e., the Sixth General Programme of Work for the period 1978-1983), was approved by the World Health Assembly in May 1976.

The statements on objectives, approaches and activities, related to each of the major WHO programmes, mentioned in the programme of work, provided useful guidelines to the Member States about the general direction in which the Organization was moving.

These statements, through a process of medium-term programming, were developed into a schedule of activities for a period of 5-6 years, corresponding to the period covered by the current General Programme of Work. The MTP proposed was tentative and was based on an assessment of national needs, made from information available in the Regional Office. The programme would be modified in light of the comments/suggestions made by the members of the EM/ACMR, and after consultation with the national health and health research authorities. Even thereafter, by its dynamic nature, the MTP would be subjected to modification, in view of experience gained, as the programme developed.

The MTP consisted of a set of activities for achieving the objectives of the Organization in Research Promotion and Development which were not directly concerned with the content of research, and another set of proposed activities dealing with topics of research related to other WHO programmes, which were thought to be of importance in the regional context. The latter set of activities would of course be managed by the Regional Office technical staff of the concerned programme/unit, in collaboration with nationals in Member States.

As the development of medical research in the Member States of the Region was, by and large, still in its early stages, the main emphasis of the Regional Research Programme would be concentrated on the development of national research capabilities, on national determination of research priorities in the light of social health policy and on implementation of relevant research activities.

The Organization should work with national health authorities and scientists in their attempts at identifying and solving health problems.

The strengthening of research capability in the countries would be mostly carried out through collaboration with them in the planning and organizing of relevant research, and through training scientists in research practices and methods through scientific participation in such collaborative activities.

In implementing the Regional Programme, national expertise would be utilized to the maximum extent possible, through the participation of national scientists in Scientific Group meetings, consultations, and by interchanges of visits between countries. In this way, the Organization would foster the development of a network of scientists who would collaborate with each other, work together on problems of common interest, and indeed help each other by sharing information, and scarce human and material resources.

Development of national capabilities in research management would be given high priority in activities dealing with strengthening of research capabilities.

An important component of the Regional Programme would be to facilitate the transfer of existing and new knowledge dealing with control and prevention of common diseases, and its subsequent utilization in the development of Comprehensive Health Services.

The Committee members appreciated the flexibility of the proposed programme, which would enable the Regional Office to modify it, in the light of experience gained during its progress. Examples of subjects which should be considered for inclusion were viral diseases, zoonoses, mental illness and chronic degenerative diseases.

The Committee also stressed that medical research councils, or analogous bodies, where they existed in the countries of the Region, should play an active role in the Regional Medical Research Programme.

V CONCLUSIONS AND RECOMMENDATIONS

The Committee noted with appreciation the progress made in the fostering of medical research in the Region, and thanked the Regional Director for his continuing interest in, and support to, this field of the Organization's work.

In reviewing the agenda items, the Committee made several indirect and direct recommendations for the attention of EMRO, Member States and scientists in the Region. These are contained in the text of the Report. The following points however were particularly stressed:

1. As a follow-up to the successful Regional Orientation Course on Health Services Research and the Workshop in Pakistan, national training workshops on Health Services Research should be sponsored in several countries of the Region, within the next year; a plan of action for these should be developed.
2. Such workshops should be followed up promptly by visits to the countries by consultants on Health Services Research, in order to facilitate development and implementation of research projects arising from them. Members of the Regional Advisory Committee on Biomedical Research should accept to share responsibility for the follow-up to HSR training generally.
3. The EM/ACMR noted with satisfaction the progress made in implementing the 3-country study to assess health coverage, including drug utilization, at the primary health care level, and considered the choice of the 3 countries appropriate, as these countries were representative of different health conditions and the study should yield results applicable to a large proportion of the Region.

The Committee also felt that this study was, in itself, a training opportunity for the three countries, and would also provide a useful basis for planning further training-cum-research activities in HSR in the Region. It was recommended that steps to plan further implementation of the results of the study be initiated during the earliest planning phases of the study.

4. The Committee considered that while studies on the use and composition of ORS should continue to be supported, research should also be sponsored on the identification of aetiological agents, especially viral organisms of diarrhoea.

Consideration should be given to designating and strengthening a Collaborating Centre in the Region to provide reference services and train scientists from the Region in microbiological and virological techniques for detection of pathogens.

5. In view of its fundamental role in contributing to scientific medicine generally, as well as the need to extend various forms of drug studies in the Region (see section IV.3), high priority should be given to develop training and research programmes in clinical pharmacology in the Region.

6. The Committee members endorsed the approach being adopted by the Regional Office in the development of a research programme in traditional medicine and emphasized that it should remain relevant to the main purpose of rational utilization of traditional health workers in the delivery of health care, especially primary health care.

7. It was recommended that, in view of the importance and usefulness of the Directory of Medical Research Institutes in the Eastern Mediterranean Region to medical research workers within and outside the Region, it should be continued to be updated every three years. Members of the Committee should assist in obtaining information from institutes in their respective countries which had not supplied the requisite information earlier.

8. Recognizing the paucity of institutions in the Region which had present potential to effectively serve as Research and Training Centres in the fields relevant to the health problems of the Member States, the Committee recommended that WHO/EMRO should

provide continued and sustained assistance to selected Centres in the Region in order to develop their capabilities for possible future recognition as WHO Collaborating Centres.

9. The Committee members, while expressing their appreciation of the efforts of the Regional Office in providing health literature services to scientists in the Region, felt that it was still necessary to further disseminate information about this service amongst the scientific community in the Region.

10. In view of the importance of parasitic diseases in the Region, the Committee welcomed the establishment of a Regional Advisory Panel on these diseases. This should help to promote research and to strengthen inter-country exchange of knowledge for the control of these diseases.

11. The Committee also noted with satisfaction that the Regional Office is planning to convene a Scientific Group Meeting on Liver Diseases in pursuance of an earlier recommendation. The Committee requested that the report of the group be made available to its next meeting.

12. The Committee agreed that the Regional Programme for field research in Malaria should be continued along the lines proposed, in close coordination with the WHO Special Programme for Research and Training in Tropical Diseases.

13. The Committee recommended that the action-oriented research on Nutrition be given high priority, and supported, in principle, the programme proposed.

14. The Committee agreed with the lines along which the research studies in the Blue Nile Health Project were contemplated. This provided an excellent opportunity for field work connected with the TDR programme, and an opportunity for the study of the socio-economic impact of water-related diseases.

15. The Committee was pleased to note the comprehensive and flexible medium-term programme for the development of medical research in the Region. It should serve as a useful framework for planning activities, both at the Regional and the National levels.

16. Because of the importance of behavioural and social studies in health research, scientists from these disciplines should be encouraged to participate in research projects in this field.

17. The Committee recommended strongly that the Governments be urged to provide attractive and competitive career opportunities to biomedical scientists.

ANNEX I

LIST OF PARTICIPANTS

COMMITTEE MEMBERS

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Dr A. Robertson	Director, Health Manpower Development	Eastern Mediterranean Regional Office, Alexandria
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Dr K.S. Rao	Regional Adviser, Nutrition	Eastern Mediterranean Regional Office, Alexandria
Dr L. Delfini	Regional Adviser, Malaria	Eastern Mediterranean Regional Office, Alexandria
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ANNEX II

ADDRESS BY DR A.H. TABA
DIRECTOR
WHO EASTERN MEDITERRANEAN REGION

at the

OPENING SESSION OF THE FOURTH MEETING
OF THE EM REGIONAL ADVISORY COMMITTEE
ON BIOMEDICAL RESEARCH

TUNIS, 10 - 13 September 1979

Dear Colleagues,

I take great pleasure in welcoming you to the Fourth Meeting of the Eastern Mediterranean Advisory Committee on Biomedical Research, and I am grateful to you for taking time to attend this Meeting. I extend a particular welcome to our new members, and would like to record my appreciation for the contributions made by those members of the Committee whose term expired this year, and hope that they will continue to be associated with us in the development of the Regional Research Programme.

In accordance with the wishes expressed by this Committee at one of its previous meetings, we are holding this Session away from the Regional Office, in one of our Member States. I am most grateful to H.E. The Minister of Public Health of Tunisia for hosting this Meeting and to Dr Mourali for his assistance in making arrangements for holding it in the Salah Azaiz Institute.

As you will note from the agenda, substantial activities have taken place in the area of Health Services Research, to which you had assigned a high priority. Dr Hassouna, now a member of our ACMR, has been involved in most of our HSR activities and he will be talking about them to you, early in the Meeting. We also have Professor Maurice Backett with us for this Meeting to act as a resource expert and render advice on the future development of this important subject.

During the Meeting, we will also report the progress of studies on Drug Utilization and Oral Rehydration, since the last Meeting.

The possible application of Traditional Medicine in the provision of Primary Health Care in many of our Member States appears to be worth examining. Therefore, a programme of research in this field has been planned and you will be hearing about it during the course of the Meeting.

The resurgence of malaria in many countries of the Region is well-known. A programme on field research in Malaria has been initiated to help seek solutions to problems hindering the progress of malaria control measures, and information about this programme will be presented to you.

Malnutrition is a major factor associated with ill-health in the developing countries. Even though closely related to factors outside the direct influence of the health sector, it is felt that with new approaches, through Primary Health Care, an impact can be made on malnutrition in the community. Accordingly a Regional Programme for Applied Nutrition Research has been prepared and will be discussed with you during the Meeting.

The Government of Sudan, in collaboration with WHO, has developed an innovative large-scale project whose objectives are to control and prevent water-associated diseases in various irrigation schemes in the Gezira Provinces. The project aims at developing new and less expensive control techniques for integration into the comprehensive control effort, and to make a careful epidemiological and economic evaluation of the impact of this control effort on the agricultural community in the Gezira Province. The value of the control programme will be scientifically assessed for possible application to other irrigation systems, in similar tropical regions.

The research component of this project illustrates very well the kind of research that should be built-in to support large health development projects, and it is for this reason that it is included as an agenda item for this Meeting.

During this Meeting you will also be reviewing the Regional Medium-term Programme for Research Promotion and Development. I feel that, during the next 4-5 years, our major task should be to collaborate with our Member States in building a strong infrastructure for research that is best suited to their socio-economic condition. Rather than promoting establishment of new institutions, we should be investing in training young scientists in the required disciplines and creating a conducive environment for them to work together within their own countries and with others elsewhere, on problems of common interest.

I also believe that we should step up our financial input, as the infrastructure develops, realizing, of course, that WHO funds, by themselves, cannot, and will not, be able to meet all costs of all our Member States. The funds we have should be wisely used as seed money and for the catalyzing of national efforts.

Finally, I would like to call upon you to discuss, during the coming days, how you yourselves, as members of this Committee, can further help us in the development of the Regional Research Programme, even though you are here as individuals, rather than as representatives of your country. I think you can make a valuable contribution to the development of research in each of your own countries. If WHO can be of any assistance to you in this connection, please let us know.

Once again, I would like to thank the Ministry of Public Health of Tunisia for hosting this Meeting and all of you for giving us the benefit of your time. I look forward to your wise advice and guidance on the WHO Research Programme in the Region.

ANNEX III

AGENDA

1. Opening of the Meeting
2. Election of Officers
3. Adoption of the Agenda
4. EMRO-sponsored research activities since the last meeting of the EM/ACMR held in March 1978
 - (a) Health Services Research Activities
 - Reports of:
 - Pre-Course Workshop on HSR, Cairo, Egypt, 25 September - 1 October 1978.
 - Orientation Course on HSR, Alexandria, Egypt, 3-19 January 1979.
 - National Workshop on HSR, Islamabad, Pakistan, 7-12 April 1979.
 - Research Protocol for the three-country study on "Challenges to Effective Health Coverage".
 - Research Programme in HSMD of the WHO Collaborating Centre of the Centre of Health Sciences, Ben Gurion University of Negev, Beersheba, Israel.
 - (b) Research on Alternative Approaches to Oral Rehydration.
 - (c) Drug Utilization Studies.
 - (d) Research in Traditional Medicine.
 - (e) Directory of Medical Research Institutions in EMR Countries.
 - (f) The WHO Collaborating Centres in the EMR Countries.
5. Review of the Reports of the 20th Session of the Global ACMR, and its Sub-Committees on Nutrition, HSR and Biomedical Communications.
6. Review of the activities of the Special Programme for Research and Training in Tropical Diseases
 - (a) Report on the site visit to Sudan for institutional strengthening.
 - (b) Establishment of a Regional Panel on Parasitic Diseases (excluding Malaria), and the proposed meeting of a Scientific Working Group on Liver Diseases.
 - (c) The Regional Programme for Field Research in Malaria.

7. The Regional Programme for Applied Nutrition Research.
8. The research component of the Action Plan for the project "A comprehensive approach to the prevention and control of water-associated diseases in the irrigated schemes of the Gezira Province, Sudan".
9. The Regional RPD Medium-term Programme.
10. Conclusions and Recommendations.

ANNEX IV

LIST OF BASIC DOCUMENTS

Provisional Agenda	EM/4TH.MTG.ACMR/1 Rev.1
Provisional Programme	EM/4TH.MTG.ACMR/2
Provisional List of Participants	EM/4TH.MTG.ACMR/3
Health Services Research Activities: Reports of:	EM/4TH.MTG.ACMR/4
- Pre-Course Workshop on Health Services Research Cairo, 25 September - 1 October 1978	
- Orientation Course on Health Services Research Alexandria, 3-19 January 1979	
- National Workshop on Health Services Research Islamabad, 7-12 April 1979	
Agenda item 4(a)	
Comparative study on the prospectives and requirements to achieve effective health service coverage on three countries in the EMR	EM/4TH.MTG.ACMR/5
Agenda item 4(a)	
Research Programme on Health Service Manpower Development of the WHO Collaborating Centre of the Centre of Health Sciences, Ben Gurion University of Negev, Beersheba, Israel	EM/4TH.MTG.ACMR/6
Agenda item 4(a)	
Research on Alternative Approaches to Oral Rehydration	EM/4TH.MTG.ACMR/7
Agenda item 4(b)	
Drug Utilization Studies	EM/4TH.MTG.ACMR/8
Agenda item 4(c)	
Research in Traditional Medicine	EM/4TH.MTG.ACMR/9
Agenda item 4(d)	
Directory of Medical Research Institutions in EMR Countries	EM/4TH.MTG.ACMR/10
Agenda item 4(e)	
WHO Collaborating Centres in the EMR Countries	EM/4TH.MTG.ACMR/11
Agenda item 4(f)	
Report on the site visit to Sudan for institutional strengthening	EM/4TH.MTG.ACMR/12
Agenda item 6(a)	

Establishment of a Regional Panel on Parasitic Diseases (excluding Malaria), and the proposed meeting on a Scientific Working Group on Liver Diseases Agenda item 6(b)	EM/4TH.MTG.ACMR/13
The Regional Programme for Field Research in Malaria Agenda item 6(c)	EM/4TH.MTG.ACMR/14
The Regional Programme for Applied Nutrition Research Agenda item 7	EM/4TH.MTG.ACMR/15
The Research Component of the project "A Comprehensive Approach to the Prevention and Control of Water-associated Diseases in the Irrigated Schemes of the Gezira Province, Sudan" Agenda item 8	EM/4TH.MTG.ACMR/16
The Regional RPD Medium-term Programme Agenda item 9	EM/4TH.MTG.ACMR/17