



INFORMAL CONSULTATION ON RESEARCH PRIORITIES
IN DIARRHOEAL DISEASES IN EGYPT

EM/CON. DDR. EGY/9

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WHO Regional Diarrhoeal Diseases
Programme

By

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Introduction:

Acute diarrhoeal diseases constitute one of the important causes of morbidity and mortality in all the countries of the Eastern Mediterranean Region. They head the list of the great killers among infants and young children, particularly in the age group from 6 to 36 months.

Epidemiological studies in the Eastern Mediterranean Region have shown that children in the high risk group experience a minimum average of four attacks of acute diarrhoea per child per year, and that diarrhoeal diseases are among the leading causes of hospitalization.

As regards mortality, it is estimated that out of the 11 million children born in the Eastern Mediterranean Region each year, approximately 2 million children die before they reach the age of 5 years. Of these 2 million deaths, between 30 and 40% (i.e. around 3/4ths of a million) die of diarrhoeal diseases. This high death toll is due to the fact that many of the children are already suffering from a state of chronic malnutrition, over which a superimposed acute diarrhoea usually has a rather serious consequence.

Beside its immediate effect as a cause of morbidity and mortality, it is to be noted that diarrhoeal diseases and malnutrition among young children are important contributing factors in retardation of physical and mental growth at older ages.

Diarrhoeal disease control has always received particular attention by Member States and by the WHO Regional Office for the Eastern Mediterranean Region. Since its establishment, EMRO has collaborated with countries of the Region in investigating outbreaks, in epidemiological studies, in the development of facilities (such as laboratory services), in research and in the actual control measures.

Although cholera has not been the most prevalent diarrhoeal disease in the Eastern Mediterranean Region in the last two decades, yet it had received the greatest attention in view of the fact that most countries of the Region are subject to importation of the disease from its endemic foci and the presence of cholera,

whether in an epidemic form or even as sporadic cases, has until very recently brought about psychological and socio-economic problems, largely due to the exaggerated reaction of the neighbouring countries. This was further emphasized with the appearance of the seventh cholera pandemic, which reached epidemic proportions in several countries of the Region in the early 1970s and so interest in diarrhoeal diseases among Member States was mostly confined to cholera rather than other diseases. The concentrated efforts of EMRO, during the last five years, have shifted the **emphasis** of Member States to acute diarrhoeal diseases of infancy and childhood, which are, at present receiving top priority, in spite of the fact that cholera is being reported every year in several countries in the Region.

Following WHA31.44 and the launching of the Global Diarrhoeal Diseases Control Programme, regional activities in diarrhoeal disease control have been augmented.

Objectives of the Regional Diarrhoeal Diseases Control Programme:

The Regional programme objectives are to reduce mortality and morbidity from acute diarrhoeal diseases and from associated ill effects particularly malnutrition, especially in infants and young children.

Approaches:

The approaches adopted to achieve the programme objective include:

1. Promotion of the value and advantages and hence extensive use of ORT in the management of acute diarrhoeas through the primary health care system.
2. Promotion of MCH care practices related to the prevention of diarrhoea.
3. Promoting appropriate and effective environmental health interventions and technologies in order to reduce the incidence of diarrhoeal diseases.
4. Strengthening the epidemiological surveillance system to achieve early detection of epidemics.
5. Developing national capabilities for programme delivery and evaluation through proper training.
6. Stimulating and supporting research directed towards improving the various approaches for delivery of relevant health services.

Activities

Regional activities in diarrhoeal diseases control are divided into two major components, namely:

- health services and
- operational research

(A) The Health Services Component:

A.1 Planning

EMRO continues to collaborate with national health authorities with respect to national programme formulation. WHO staff at the Regional Office and in the field and also short-term consultants are working closely with national health authorities in this respect. Active national commitments and participation were secured in the majority of the countries. It is satisfying to note that these are the countries where diarrhoeal diseases morbidity and mortality are highest in the Region. By mid 1982 six countries representing more than half the population of the Region have national programmes with plans of operation and a beginning of field activities. This number is increasing continuously as every effort is being made for getting more countries committed to diarrhoeal disease control and for boosting activities in already committed countries.

Training in programme planning and management was given special attention. Eighteen senior nationals who are managers or potential managers for national diarrhoeal diseases control programme from 10 countries of the Region were trained in this field. Next October a regional training course will take place in Pakistan and will bring the number of trainees to forty five from seventeen countries of the Region.

EMRO is also joining in bilateral and other activities between Member States and agencies such as USAID with respect to diarrhoeal diseases control programmes development in the countries of the Region.

A.2 Operations

A.2.1. EMRO recognizes the need for a multidisciplinary approach for diarrhoeal diseases control. In its efforts for the development of national diarrhoeal diseases control programmes, special stress is made on proper linkage with various sectors involved in the implementation of the diarrhoeal disease control strategies. Although the main thrust of diarrhoeal diseases control programmes is on widespread implementation of oral rehydration yet the other three strategies are given due attention. Linkage is being established between diarrhoeal disease control activities and water supply and sanitation activities which are gaining momentum during the present international drinking water decade.

Although the diarrhoeal diseases control programme may have a special entity at central level, yet serious efforts are made to achieve implementation of activities at the peripheral level, through primary health care delivery systems. WHO staff responsible for epidemiological surveillance, MCH, primary health care and also laboratories, both at the Regional Office and in the field are closely collaborating in diarrhoeal disease control activities in the countries of the Region. As well,

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wherever possible, primary health care services are used as an entry point for treatment of diarrhoea, and for the delivery of health education messages related to the prevention of diarrhoeal diseases.

A.2.2. EMRO is collaborating with national authorities and other agencies especially UNICEF in achieving adequacy of ORS supplies.

National production of oral rehydration packets through production lines supplies by UNICEF is now functioning in four countries of the Region, and is expected to develop in another four countries by 1983.

In addition, WHO has succeeded in encouraging some national drug and pharmaceutical companies in countries of the Eastern Mediterranean Region to produce oral rehydration packets. Although such packets are sold through pharmacies, yet they help in satisfying some of the demands for ORS created by increasing interest in oral rehydration.

UNICEF is providing approximately six million packets (each packet to be diluted in 1 litre of water) a year to Member States of the Region, and EMRO has provided 3 million cachets in 1981. As well, USAID is planning to provide several million packets of ORS to support national programmes in some countries of the Region.

It is to be noted that ORS provided from the above sources are far below reaching actual needs or demands. EMRO realizes the fact that the increasing national interest and plans so far formulated will not achieve their objectives and lose momentum if the essential needs for ORS are not met. Therefore there is a pressing need to look for other possible means of ORS production such as cottage industry production (packing ORS) and to further stimulate national drug and pharmaceutical companies to produce ORS.

A.3. Training:

Although promoting regional training activities which have the additional benefit of exchanging experience between countries of the Region, EMRO believes that national training, where trainees are trained under the same conditions as those they would meet in their future career, is the most useful approach.

Several national seminars and training courses were organized and are planned within the WHO supported epidemiological surveillance and MCH projects in Member States of the Eastern Mediterranean Region. Various levels of health workers have been trained in these courses.

EMRO is collaborating with national authorities in the development of training centres for diarrhoeal disease control especially at teaching institutes (medical and nursing) where both undergraduate and postgraduate **students** are trained. This

is thought to be a good investment for the future. Four such centres were developed in the Region, in Lahore (Pakistan), Alexandria (Egypt), Khartoum (Sudan) and in Amman (Jordan). These centres are functioning and offering courses on clinical management between 1-2 weeks each for an average of 10-15 doctors and nurses per course. The number of trained personnel through these centres exceed 400. It is EMRO's plan to develop two other centres every year until at least one national training centre is available in each country with a diarrhoeal diseases control programme.

These centres are preparing training materials including self-instructional modules which are very useful in the training as well as educational materials suitable for the populations. However, training is essentially practical in the management of cases of acute diarrhoea and in educating mothers on proper child care practice in cases of diarrhoea.

In the area of technical training, EMRO is active in the development and dissemination of educational material. Several documents were and are being translated into Arabic, such as:

- Guidelines for Cholera control
- Guidelines for the Trainers of Community Health Workers on the Treatment and Prevention of Acute Diarrhoea
- A Manual for the Treatment of Acute Diarrhoea
- Breastfeeding
- Diseases transmitted by Food

A.4. Evaluation:

Regional activities with respect to assisting countries in evaluating control programmes are mostly geared through WHO collaborative activities for the development of surveillance of communicable diseases since without proper surveillance, the impact of diarrhoeal disease control programmes on mortality and morbidity from diarrhoeal diseases cannot be assessed. Efforts are being made to develop national routine surveillance of diarrhoeal diseases within the existing communicable diseases control programmes coupled wherever possible, with the microbiological aspects.

In all plans of operations of national diarrhoeal disease control programmes, evaluation is being included as an integral part, and indicators for assessment and evaluation are developed.

(B) Operational Research:

A multidisciplinary Regional Scientific Working Group on Diarrhoeal Diseases Research was established by EMRO for two main objectives:

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1. To establish priorities for applied research in the light of the experience and knowledge of the situation of diarrhoeal diseases in the Region. This would be complementary to the action oriented implementation component of the regional diarrhoeal diseases control programme; it also responds to operational needs of the national programmes.
2. To set up a mechanism both for reviewing research proposals and making recommendations on WHO financial support to these proposals as well as for periodically evaluating ongoing research.
3. The group met for the first time in 1980 and recommended areas for research in diarrhoeal diseases in the Region. Their recommendations are being used as guidelines for the support of research proposals. The second meeting was in February 1981 and its next meeting is due early in September 1982.

The Ministry of Education in Egypt has been very active in disseminating information about the WHO Diarrhoeal Diseases Research Programme. This information was sent to all the universities and research institutes in Egypt. This gesture is welcomed by WHO. However, enough information should have been given to research workers that projects should be of direct relevance to the national Diarrhoeal Diseases Control Programme and those directed towards improving and developing effective ways of implementing control programmes.

The present system for reviewing proposals begins by a preliminary review from within WHO (both the Regional Office and Geneva) for advising the investigator with regard to the protocol design and submission to the appropriate Scientific Working Group. The protocol is then reviewed by at least two experts from outside WHO to study the quality and integrity of the research programme. If in principle it is felt to be suitable for funding, the reviewers' proposals for any modifications or clarifications in the protocol are conveyed to the applicant and the Regional Office ensures that a revised protocol is prepared, taking into consideration the reviewers' comments. All revised protocols are then discussed in a meeting involving some members of the Regional Scientific Working Group, which makes recommendations for WHO's financial support of projects within available budgets. The recommendations of the group are then submitted to the Regional Programme Committee and final approval is given by the Regional Director.

In your files you will find a list of the WHO financially supported research projects on diarrhoeal diseases in Egypt as well as a list of the proposals received in this Office which are not yet financially supported. You will have a chance to hear from the principal investigators of some of the ongoing studies about these projects.

I wish to indicate to you that we are supporting applied diarrhoeal diseases research in other countries of the Region. Of the topics which are of general interest to other countries WHO is supporting:

1. A study on the ORS Formulation Based on Currently Used Home Remedies

This project aims at identifying the most popular and appropriate home-made remedies traditionally used in Lebanon for the treatment of diarrhoea. A survey will be conducted in the greater Beirut area, and few rural communities, to assess the traditional methods employed at home for the management of diarrhoeal diseases.

The kind and composition of home remedies used will be assessed and samples of foods will be assayed for their contents of nutrients and electrolytes. An attempt will be made in the laboratory to formulate oral rehydration mixtures using household materials.

2. Evaluation of the Impact of Mass Implementation of Oral Rehydration on Diarrhoeal Diseases of early Childhood in the Gaza Strip

A project for the application of oral rehydration therapy in the management of cases of acute diarrhoea in children 1-36 months of age at all health centres through the Gaza strip was initiated since 1979.

This study is meant to assess the impact of mass oral rehydration use on the number of hospitalizations from acute diarrhoea and on diarrhoea-related malnutrition and mortality in the Gaza strip area during a period of two years 1980 and 1981.

In this respect, please note that it is our feeling that, as compared to bio-medical research, there is a greater need for duplicate studies in some research areas as different solutions might be applicable to the same operational problem in different countries of the Region and even within different governorates of the same country.