EIGHTH MEETING OF
THE REGIONAL SCIENTIFIC WORKING GROUP ON
DIARRHOEAL DISEASES RESEARCH
Kuwait, 30-31 March 1986

Kuwait

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EDITORIAL NOTE

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1. INTRODUCTION

The Regional Scientific Working Group (RSWG) on Diarrhoeal Diseases Research held its eighth meeting in Kuwait on 30 and 31 March 1986. The list of participants is attached (see Annex).

The meeting was opened by His Excellency the Minister of Health of Kuwait, Dr Abdul Rahman Al Awadi. In his opening speech he welcomed the participants and emphasized the importance of diarrhoeal diseases as one of the major causes of morbidity and mortality in the Region and the value of applied research in solving the operational problems of national CDD programmes. Dr Al Awadi also emphasized the important role which community participation can play in promoting the use of appropriate technologies such as oral rehydration therapy as a step towards achieving the global goal of Health for All by the Year 2000 (HFA/2000).

The message of the Regional Director, Dr Hussein A. Gezairy, was presented by Dr M.H. Wahdan, Director, Disease Prevention and Control. Dr Gezairy, in his message, acknowledged the continued support of H.E. The Minister of Health for national, Regional and global efforts to achieve Health for All. He then underlined the public health importance of diarrhoeal diseases which are the main cause of morbidity and mortality in infants and young children in the Region and the need to develop more effective control programmes, through operational research and innovative approaches. He acknowledged the efforts of the RSWG in advising WHO on research topics and fields which are deserving of financial support by WHO.

The Group adopted the provisional agenda and unanimously welcomed the participation of H.E. Dr Al Awady who accepted to chair the second day of the meeting. Major-General M.I. Burney (Pakistan) was elected Chairman for the first day.

2. PROGRESS OF THE REGIONAL DIARRHOEAL DISEASES CONTROL PROGRAMME

The health service component of the Regional Programme is directed towards establishing national control of diarrhoeal diseases (CDD) plans of action, their implementation, monitoring and improvement through evaluation, reviews and programme revision.

The main strategy of the programme is oral rehydration therapy (ORT) but efforts are also made by WHO EMRO and UNICEF to promote the inclusion of other strategies to the extent that these can be applied in the countries of the Region. These include the promotion of breast-feeding, environmental and personal hygiene, food control, specific health education aimed at women, community participation and improvement of surveillance.

However, it is realized that there is a need to work out appropriate approaches to facilitate the inclusion of these other strategies in CDD country programmes.
Presently, of the twenty-two Member States in the Region, nineteen, representing over 98% of the Region's total population, have operational CDD programmes. The three countries which do not have specific CDD programmes have already reached a relatively low level of infant mortality and diarrhoeal disease incidence in children, due to the activities of the primary health (PHC) service which includes the components of CDD.

One of the main activities supported and promoted by WHO is training. This involves training of national programme managers in managerial aspects to improve their skills, as well as training of mid-level supervisors to improve their supervisory role. Most important is extensive training in clinical management of acute diarrhoea for all levels of health workers involved in treatment of diarrhoeal diseases. A number of managerial and technical national training courses have been conducted in Arabic, Persian and Urdu.

National and Regional congresses and conferences on paediatrics or meetings of medical associations are used to present evidence of the value of ORT and its feasibility and thus promote its use among physicians.

Travelling seminars were organized with WHO and UNICEF support, essentially for medical officers in major cities in some Member States, particularly those where physicians are reluctant to use or prescribe a simple treatment such as oral rehydration salts (ORS).

UNICEF and WHO have continuously worked together towards satisfying the needs of Member States for ORS. In addition to the five countries which have been provided by UNICEF with production lines of ORS, the WHO/UNICEF Engineer is providing Member States with technical expertise in this field.

The Region is witnessing an increase in the number of morbidity and mortality surveys, knowledge, attitudes and practice (KAP) and ORT coverage surveys, programme reviews and other data collected through management information systems (MIS) and from other sources. The need for improvement of the quality of data and for their rapid analysis, feedback and utilization presents a problem which can only be solved with rational and appropriate use of modern electronic data-processing. The Regional Office therefore has been planning further development of a Regional information system which would embrace, in addition to CDD, other activities related to child health. This, it is hoped will improve the quality of national programmes through more efficient monitoring and evaluation of achievements in relation to set targets and will also enable timely and proper revision of the programmes.

Most of the countries which began earlier to implement national CDD programmes have had at least one programme review. The results of these reviews provide most useful information for the revision of country programmes. These reviews have also given guidance concerning strategies and other aspects of importance to the programme.

In the area of operational research, it is to be noted that research topics supported by the RSWG are closely related to the national CDD programme.
To date, 30 research projects have been supported financially by WHO. Eleven of them have been completed. The results of some of this research have been used for modifying national strategies for CDD in the countries concerned.

During the period since the last meeting of the RSWG three national consultations on CDD research have been supported by WHO, in Islamic Republic of Iran, Iraq and Pakistan, as recommended by the RSWG. These consultations were successful in making CDD programme managers take an active part as they realized the value of operational research in solving the problems encountered while implementing CDD programmes.

During these consultations, a few researchers have been assisted in drafting their research proposals. However, it was felt that the two-day duration of these consultations is too short a period for this purpose. There is need to have workshops, of longer duration, in order to allow sufficient time for assistance to principal investigators for drafting well-designed and relevant research project proposals.

The Regional plan for the present biennium (86/87) for both health services and research components was presented and discussed.

The health services component includes the following main activities:

(a) To review national CDD plans with the objective of introducing the necessary rephasing, according to achievements and constraints.

(b) To collaborate with national authorities in the three countries without a national CDD programme in formulating national plans of operation in accordance with each country's specific needs.

(c) To support and expand training efforts, especially those directed toward developing the skills of first-line providers of ORS and their supervisors.

(d) Promotion of CDD morbidity and mortality surveys and comprehensive programme reviews.

(e) Promotion of other strategies for CDD and extending beyond ORT to the preventive measures which are applicable at family level, such as domestic and personal hygiene.

(f) Holding annual meetings of national CDD programme managers to assess achievements, exchange views and discuss constraints and achievements and ways and means of improving national CDD programmes.

The research component of the Regional plan of work emphasizes operational research as an important tool for improving effectiveness of national CDD programmes.

The RSWG reaffirmed the need for more WHO-supported national consultations on operational research in CDD which should include the necessary time for assisting potential principal investigators in the preparation of research proposals.
The Group also felt that WHO should make the necessary arrangements to provide research workers with relevant references and other bibliographical material. In addition, EMRO should also take steps to compile an inventory of important diarrhoeal diseases research carried out in the Region including that supported by WHO, and to make this information available to potential investigators and other interested parties. Efforts should also be made to publish selected studies of particular importance for national CDD programmes in national and/or international journals.

The Group stressed the need to promote research in innovative approaches directed towards the wide application of ORT as well as in the support of all other feasible and effective appropriate technologies. The need for interdisciplinary collaboration among social anthropologists, sanitary engineers, health educators and others was stressed.

Studies on specific national and Regional problems related to enteric diseases and their mode of transmission due to environmental conditions, lifestyles and cultural and traditional habits, would provide a sound basis for control programmes and should receive priority.

3. FOLLOW-UP OF FINANCIALLY SUPPORTED RESEARCH PROJECTS

The final reports of eleven projects were received and reviewed by the Regional Office. Brief one-page summaries were compiled and presented to the RSWG. It was felt appropriate to request principal investigators to prepare summaries and submit them with the final report. These summaries should cover, in particular, those aspects of the study which are directly relevant to national CDD programmes, which then will be fed into the Regional CDD computerized data base for easy retrieval and distribution to those interested.

Follow-up is needed for other supported on-going research projects. It is necessary to urge those principal investigators who have already completed the collection and analysis of data but have not yet prepared a report to inform WHO as soon as possible of the results obtained, in order to achieve the main objective of immediately using the results of these studies to solve outstanding problems and improve national programmes.

4. HIGHLIGHTS OF GLOBAL RESEARCH ACTIVITIES

The Group was informed about the present and planned activities of the Global CDD Programme in the research field.

Sixty-two new research projects were given support by Global and Regional Scientific Working Groups in 1985. Of 356 total projects supported by the Programme since its inception 70% are still in progress. Studies on persistent diarrhoea, flavoured ORS, efficacy of early home treatment, the impact of certain prevention-oriented interventions and the role of risk factors in diarrhoea incidence were given priority. Final analysis of 40 diarrhoeal aetiology studies supported by the Programme during 1981-1985 confirmed previous reports and brought up some new specific observations presented in detail in the fifth Global CDD Programme report.
During 1985, the scope of work of three Global Scientific Working Groups was redefined and it is expected that the Regional Scientific Working Groups will give increased emphasis to problem-solving research. The work of the RSWGs is to be thoroughly evaluated during 1986 in terms of achievements and of possible changes necessary for improvement.

5. REVIEW OF RESEARCH PROPOSALS

Proposals received by the Regional Office were submitted to the RSWG with the opinion of two reviewers. The Group, after reviewing the proposals, came to the following conclusions and made the respective recommendations:

5.1. Underutilization of ORS in urban areas, Rawalpindi City (proposed by Dr Muhsin Hubarak, Research Director, Health Services Research Centre, Pakistan Medical Research Council, Islamabad, Pakistan).

The proposed research is composed of two main parts:

(a) survey of perception of households, physicians and vendors about diarrhoeal diseases and use of ORS in their treatment;

(b) study of drinking water quality.

- The Group was of the opinion that the subject of the first part of the proposed study is directly related to the national CDD programme while that of the second part is not and hence should not be considered.

- The study design needs modifications and improvement. The proposal needs to be more systematically presented.

- The objectives should be clearly stated and the methodology needs to be described in detail, population selection defined, the method of training of the interviewers included and the questionnaire to be used for interviewing attached.

5.1.1. Decision

The author of this proposal should be advised of the above and informed that he needs to make modifications as indicated and resubmit the proposal to WHO.

5.2. Mothers' treatment-seeking behaviour (proposed by Dr A.H. Daoud, Psychology Department, Faculty of Education, Cairo University, Egypt).

The Group was of the opinion that this subject, although important, is of low priority at the present stage of the development of national CDD programmes in Egypt, in view of the fact that these aspects have already been thoroughly studied.

However, the RSWG considered that psychologists and other professionals can contribute to operational research in CDD and that the author should
therefore be encouraged to acquaint himself more closely with the national CDD programme and possibly consider submitting a proposal including the methodology and techniques applied in psychology for a problem-solving-oriented study on CDD.

5.2.1. **Decision**

The proposal was rejected.

5.3. **Establishment of a rapid diagnostic test for the diagnosis of typhoid fever (proposed by Dr M.A. Khan, PMRC Central Research Centre, National Institute of Health, Islamabad, Pakistan).**

The Group considered that the proposal deals with a subject of great practical importance for control and treatment of typhoid fever, a disease of public health significance in the Region. The techniques and methodology, however, are more of a basic character and global importance and should be dealt with by the Global SWG on Immunology, Microbiology and Vaccine Development. The Group also considered that this project deserves support and attention for possible inclusion in the multicentre (international) study aimed at improving diagnostic methods.

Furthermore, the RSWG recommended to the Global SWG that the principal investigator and his Centre be included in any multicentre study on this subject.

5.3.1. **Decision**

To refer the proposal to WHO/CDD/HQ with a recommendation to follow it up.

5.4. **Optimizing utilization of ORS (proposed by Dr Siraj-ul-Haq Mahmud, Health and Nutrition Section, National Planning Commission, Government of Pakistan, Islamabad, Pakistan).**

The Group reviewed this comprehensive research proposal and expressed doubts that such a vast variety of subjects could be effectively studied at one time. It was of the opinion that much more limited specific subject(s) from among the very many involved should be selected and tackled one at a time. It was therefore also of the opinion that the author should be advised to consider one specific subject, especially knowledge and attitudes of the population related to ORT use, and possibly prepare a proposal with more precisely defined aims and methodology, including sample size, and submit it to WHO.

The Group noted that Dr Kazmi is a co-investigator in the above study. It was recalled that in 1983 the RSWG reviewed a study proposal submitted by Dr Kazmi, namely: "Study of the factors optimizing ORS delivery system" and approved funding of the pilot study. Dr Kazmi presented his final report and the RSWG feels that Dr Siraj-ul-Haq Mahmud and Dr Kazmi should be invited to submit a revised proposal for the main study.
5.4.1. Decision

The proposal is not acceptable as it stands at present; the Group advises the author(s) to revise the proposal and resubmit it.

5.5. Epidemiology of Campylobacter jejuni in a rural community in Egypt
(proposed by Dr Bousaina Zaki Massoud, Professor of Microbiology, Faculty of Medicine, Alexandria University, Alexandria, Egypt).

The Group considered that this study is relevant to the control of diarrhoeal diseases in rural Egypt and therefore should be encouraged. However, in its present form the epidemiological component, which is of greatest importance, needs to be strengthened. The study design, as far as epidemiological enquiries, methods of data collection, survey of environmental factors, contact between man and domestic animals and statistical analysis are concerned, needs to be described with more precision to enable the reviewers to form an opinion of the value of the study proposed.

5.5.1. Decision

The principal investigator should be invited to include an epidemiologist as co-researcher, to reformulate the proposal and resubmit it to WHO.

5.6. Comparison between standard WHO ORS and flavoured ORS formula in children suffering from acute infantile gastroenteritis (proposed by Dr Ashfaq Ahmad, Department of Child Health, Khyber Hospital, Peshawar, Pakistan).

The Group considered that the problem of possible untoward side effects of widely propagated, privately produced, flavoured fluid deserves study in view of its relevance to national CDD programmes. However, doubts were expressed as to the usefulness of such a study should it show, as it may, that oral rehydration with such fluid is equal or possibly superior to that obtained with unflavoured ORS. Since WHO HQ is conducting a series of similar studies on ORS on a global basis the Group suggested that this proposal be submitted to CDD, Geneva, for further follow-up.

5.6.1. Decision

It was decided to refer the proposal to CDD/HQ for consideration by the respective SWG.

6. TECHNICAL DISCUSSIONS

"The role of the community in the control and prevention of diarrhoeal diseases".

The paper includes an overview of the importance of community participation in CDD programmes and the techniques and means to achieve it. A review of the experience of the Egyptian Diarrhoeal Diseases Control Project in enlisting community support and also difficulties encountered by it was presented.
In the lively discussions which followed, members of the RSWG emphasized the following important needs if community participation is to be achieved.

(a) Appropriate knowledge about community health-related values as well as health practices and behaviour.

(b) Proper selection of change agents (motivators) who can convey the needed knowledge and required skills to use ORS.

(c) Development of culturally relevant educational messages and selection of suitable (most effective) media, e.g. person-to-person, radio, TV, pamphlets, etc.

(d) To ensure that messages are built upon positive community health values and practices. They should include information about the nature and proper use of ORS, as well as symptoms and dangers of dehydration.

It was noted that messages to the community are not always correct and therefore may result in lack of confidence on the part of the community. One of the most evident examples in this respect is in referring to ORT as a method for treatment of diarrhoea instead of being described as a means for the treatment and prevention of dehydration. The fact that ORT does not stop the diarrhoea creates some mistrust in the minds of the public.

Popular beliefs on the disadvantages of constipation and on beneficial "annual purges" and other traditional notions and beliefs should be taken into consideration when explaining the problem of diarrhoeal diseases and when planning a health educational programme.

The Group felt that popular notions and beliefs concerning diarrhoeal diseases should be subjects of socio-cultural and behavioural studies in order to find (a) the most effective ways to utilize some of the useful notions in supporting CDD programmes and (b) ways to circumvent the others which represent constraints.

The people of the Region adhere to traditional values and efforts should be made to use these values for motivating the population to accept ORT.

The most effective means of communication and of the transmission of messages is still not well known and is likely to vary from one area to another.

The ways in which positive knowledge on ORS is spread and why and how the "epidemics" of faulty information (resulting in ORT refusal) are transmitted are not comprehensively known, although this is of great practical importance for CDD programmes. The experience gained in some countries in the Region that the supply of ORS alone does not create public demand for it confirms that what is applicable to a certain community does not necessarily apply to another. This indicates the need for further operational research in this area.
The role of the medical profession and the way in which it often creates obstacles to public acceptance of ORT are not fully understood, neither has the positive role of school teachers, religious and community leaders been adequately explored or utilized for promotion of CDD programmes. Similarly, health education is often seen in a very narrow perspective, and a variety of existing avenues for obtaining public cooperation have not been explored or utilized.

In conclusion, the discussion underlined the urgent need for more applied research on community participation which is of crucial importance for the success of CDD programmes in the Region.

7. CONCLUSIONS AND RECOMMENDATIONS

The Group endorsed the Regional plan for 1986/87 and called attention to the need to continue promoting incorporation of ORT in the curricula of medical schools and health-related institutes. The Group also emphasized the need to continue promoting travelling seminars to major cities in order to achieve effective participation of health practitioners and paediatricians in national CDD activities, particularly oral rehydration, and in limiting unnecessary use of antibiotics and other drugs.

The Group made the following recommendations:

1. The Regional Office should make every possible effort to follow up on supported research projects and facilitate solving the problems encountered in their implementation and in the analysis and presentation of results.

2. Governments and WHO should continue promoting national consultations on CDD research. It is recommended to extend the duration of the visit of the consultant(s) involved to at least five days to help potential investigators in drafting research proposals. Another possibility is to have a follow-up visit of the consultant(s) to the countries concerned or to entrust this responsibility to members of the RSWG.

3. The Group discussed the future needs of EMR for innovative, culturally relevant and managerially feasible approaches to increase the effectiveness and efficiency of national CDD projects. Such approaches can only be developed through operational research, hence the RSWG recommended the promotion of operational research on specific problems of relevance to national CDD programmes and supporting such proposals submitted by Member States.

4. WHO should support efforts directed towards collection of information about research conducted on CDD in the countries and make the results of these studies available for wide dissemination.

5. The results of WHO-supported research projects should be communicated as soon as possible to research workers and to national CDD programme managers. An analytical study of all research proposals submitted to WHO, whether financially supported or not, should be undertaken and submitted to the RSWG, identifying areas in which further operational research is needed.
6. The RSWG recommended that studies aimed at improving information systems related to the service and research components of CDD and PHC be supported.

7. As some of the research proposals discussed need modifications which are not expected to take a long time and in order to avoid postponing decisions concerning their financial support, it is recommended to WHO EMRO to arrange for a meeting of a few members of the RSWG within a few months to study the modified protocols and other proposals which were not discussed in the present meeting due to delay in receiving responses from principal investigators to comments made by reviewers.

8. The RSWG recommended that the subject for the technical discussions at its next meeting be: "Challenges in the reorientation of health professionals towards appropriate management of diarrhoeal diseases."
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