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PAHO ADVISORY COMMITTEE ON MEDICAL RESEARCH

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WHO ADVISORY COMMITTEE ON MEDICAL RESEARCH

REPORT TO THE DIRECTOR-GENERAL

on its nineteenth session
held at WHO Headquarters, Geneva
13-17 June 1977



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ADVISORY COMMITTEE ON MEDICAL RESEARCH

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Dates for the Twentieth session: 19-23 June 1978

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Regional Office for the Americas/Pan American Sanitary Bureau: Dr A. Perez-Miravete, Chief, Research Development and Coordination

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Regional Office for Europe: Dr F. Bauhofer, Director of Health Services

Regional Office for the Eastern Mediterranean: Dr M. O. Shoib, Director of Health Services

Regional Office for the Western Pacific: Dr A. C. Reyes, Assistant Director of Health Services; Dr David Macfadyen, Coordinator, Research Promotion and Development

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Dr M. Behar, Chief, Nutrition, Division of Family Health

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Dr R. H. Henderson, Programme Manager, Expanded Programme on Immunization

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Mr K. Tekse, Dissemination of Statistical Information, Division of Health Statistics

Mr S. I. Taine, Chief, Office of Health Literature Services, Health and Biomedical Information Programme

Mr K. Uemura, Director, Division of Health Statistics

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Dr A. Zahra, Director, Division of Family Health

Agenda items 1 and 2: Opening of the session and election of officers

The Chairman, Professor N. S. Scrimshaw, opened the nineteenth session of the Advisory Committee on Medical Research (ACMR).

Professor A. M. Černuh was elected Vice-Chairman and Professor B. O. Osuntokun, Rapporteur.

Agenda item 3: Introductory statements

(a) Statement by the Deputy Director-General

The Deputy Director-General of WHO, Dr Lambo, on behalf of the Director-General, welcomed the new members of the ACMR, the Chairmen of the Regional Advisory Committees on Medical Research (RACMRs) from the African, American, South-East Asian, European and Western Pacific Regions, the representative of the Eastern Mediterranean RACMR and the temporary advisers, and noted that the presence of chairmen of the RACMRs was an important step in the development and coordination of a global research programme: for it was no longer necessary to refer to "regional ACMRs" as opposed to a headquarters ACMR, but the Committee as composed was now in a position to develop the broader functions of a global committee. In this sense this meeting constituted a milestone in the evolution of WHO's research programme.

The Deputy Director-General observed that during the past year many members of ACMR had devoted time to assisting the Organization, either in headquarters or in the regions, in the promotion of research activities: he was particularly grateful to Sir Gustav Nossal for his contribution to the successful launching of the Special Programme for Research and Training in Tropical Diseases; to Professor Bergström, who ably represented the ACMR at the Executive Board and the World Health Assembly and who had agreed to devote much of his time in the forthcoming year to working with WHO; and to the Chairman, Professor Scrimshaw, who had been most active in the regions.

As background to the discussions during the current session of the ACMR, the Deputy Director-General offered some information and indications on the current trend of WHO involvement in coordination of research as reflected in the discussions and decisions of the Thirtieth World Health Assembly held recently. WHO was at a critical stage in the development of the Organization's research policies and programmes. Following the decisions taken by the World Health Assembly, the Organization was committed to a social revolution in public health and to the adaptation of health technology to social goals. This meant commitment to a more equitable international distribution of health resources and to directing the Organization's research programmes towards solving those pressing health problems which are obstacles to social and economic development.

The resolutions of the World Health Assembly and the Executive Board during the past two years had reflected the rapid changes which were taking place in the world. The resolutions required an increase in real technical cooperation with Member States. It had been said that the reorientation of resources from headquarters and regional offices to technical cooperation at the country level would be a threat to research. This was unlikely to be so. It was an opportunity to increase the Organization's role in the coordination of research and research training. As more and more trained nationals gained expertise in health delivery disciplines, the need for WHO advisers to be sent to developing countries would decrease. However, the need for expertise in research would grow as the developing countries increasingly committed themselves to the need for national research programmes to solve their own problems.

It was evident that an increasingly important function of the Organization would be to cooperate with Member States in the planning and the coordination of national research and research training programmes, in the biomedical sciences, and in the development of health services. While it was clear that there was an acute shortage of financial resources in the regular budget of the Organization, it was a fact that when an innovative global research and training programme had been developed to the point of launching, extrabudgetary resources had been forthcoming.

The Advisory Committee on Medical Research had largely contributed to the shaping of the Expanded Programme of Research, Development and Research Training in Human Reproduction, and to the Special Programme for Research and Training in Tropical Diseases, and the Deputy Director-General was pleased to announce that participating countries had committed funds to the amount of US\$ 12 million for the Expanded Programme of Research, Development and Research Training in Human Reproduction in 1976 and over US\$ 10 million in 1977 for the initial year of operations of the Special Programme for Research and Training in Tropical Diseases. These were funds contributed to the Voluntary Fund for Research Promotion - at least equal amounts were committed by the developing countries themselves in the support they were giving to the institutions collaborating in these programmes. This was recognized by the World Health Assembly in May 1977 in the resolution adopted on the Special Programme for Research and Training in Tropical Diseases, which urged the governments of Member States to maximize their contributions and to develop to the fullest possible extent national research and training institutions and facilities in support of the programme. This programme was considered by the World Health Assembly as an excellent example of technical cooperation.

When, after gaining the approval of this Committee and of the World Health Assembly, the Director-General decided to increase the involvement of the regions in research, doubts were expressed about the wisdom of this decision. However, the necessity to obtain a political commitment by Member States to undertake national health research to solve national health problems had been proved. When headquarters alone coordinated all research and research training, a number of governments paid little or no attention to the research initiatives of this Committee and of the Organization. This inattention resulted in failure to provide career opportunities for research trainees, many of whom, frustrated by lack of support when they returned to their countries, left to contribute to the brain drain or were lost to research. With the appointment of Regional Advisory Committees on Medical Research Member States were now alert. Research and research training were included on the agenda at the Regional Committees. Governments were being stimulated to assess their health problems and to review national research to define priorities and manpower requirements. It was gratifying to see the progress being made in the Regional Advisory Committees and the reports of their representatives were awaited with great interest.

The World Health Assembly had asked the Director-General to formulate a long-term comprehensive programme for the development and coordination of biomedical and health services research. This constituted a real challenge. Following discussions about to be held, the Director-General would consider appointing a subcommittee to make an in-depth study of the evolution of the research programme and to assist in finding the most effective way to meet the needs of Member States in the coordination and promotion of research and training. No time limit had been set for the formulation of the programme. It could take one or two years to plan, or more if necessary, and must include an appraisal of the mechanisms which had been developed for external, independent review of the Organization's special programmes for research and training.

An unprecedented number of delegates had taken part in the discussion on research and research training at the recent World Health Assembly; this new interest in research was due to the fact that, since the creation of the Regional Advisory Committees on Medical Research, Member States now felt involved.

The area of health services research was a difficult and complex one and was elaborated and emphasized in the Director-General's address to the recent World Health Assembly paraphrased as follows:

The application of appropriate technology for the delivery of health care would require no less research than its generation. Health systems research was one of those neglected areas to which the Organization would have to pay much more attention if countries were to make real progress in the organization and in the management of health care. It was likely that WHO had been socially unimaginative, too theoretical and probably too perfectionist in the past. However, now that research was recognized as a national

undertaking with WHO acting as promoter and coordinator of those aspects that require international collaboration, there was reason to hope that health delivery research would become highly practical and would be closely interwoven with the delivery of health care. On the other hand, it should be fed by and feed into other components of health research, so that a continuum of laboratory, clinical, epidemiological, ecological, and health systems research would be formed, closely related to effective and efficient delivery of health care based on proven knowledge. There was a dire shortage of health systems research workers throughout the world. This was not surprising, because, in spite of initial enthusiasm some 20 years ago, this kind of research had far from gained respectability, especially among biomedical scientists. It was necessary to emphasize that, at this juncture in the evolution of the world's political conscience, science must also accept social functions and therefore social responsibility to make sure that the benefits of scientific progress are indeed applied for the well-being of mankind as a whole. If conventional scientific methodologies could not be usefully applied to the operational problems of health care delivery, such methodologies would find themselves discredited and new, more socially useful methodologies would have to be found.

The Deputy Director-General concluded by stressing the invaluable contributions ACMR Members could make by working between meetings on subcommittees, as some Members had served on subcommittees on ethics, on DNA recombinants and microbiological safety; possibly, some could serve on subcommittees on health services research and on WHO's research promotion and development programme. It was only with the continuing support and through the ACMR, with the participation of increasing numbers of the world's scientific community, that the Organization could fulfil its responsibilities in research.

Special tribute was paid to the Chairman, Professor Scrimshaw. When he became Chairman of the Advisory Committee on Medical Research five years ago, it had been said that the Committee was only a rubber stamp for WHO. In the last five years, his energy and commitment had been major factors in creating the global ACMR and the RACMRs for the development of the Organization's research policies and programmes. The Deputy Director-General thanked Professor Scrimshaw for giving new life to the Organization's research programmes and for continually challenging WHO to follow the standards for research which he carried forward with courage and conviction.

The Chairman thanked the Deputy Director-General for his kind words. He further emphasized the complementary roles of the global and regional ACMRs as contained in the minutes of the 18th session of the ACMR. He briefly explained to the new ACMR members the conduct of meetings of ACMR.

(b) Supplementary statement by the Director-General

The Director-General, Dr Mahler, recalling the controversy on whether there was need for more biomedical research or whether the technology available was adequate in the field of human population and reproduction, stressed the role that the ACMR should play in critically analysing the research functions of WHO and urging when necessary generation of new knowledge in the pursuit of the goal of health for all. In this regard the WHO headquarters secretariat and scientific groups and bodies outside WHO would need to be fully mobilized. New research methodology was needed especially in health services research to promote the application of available technology in the promotion of health, especially in the Third World, where the luxury of waste of resources on unproven intervention cannot be afforded. WHO would maintain a complete open-door policy in encouraging imaginative criticism and innovative suggestions from the ACMR.

Replying, the Chairman welcomed the open-door policy of WHO, and assured the Director-General that the ACMR would continue to be objective but cooperative.

Agenda item 4: Adoption of programme of work

The programme of work was adopted with slight modification to allow item 6.5, Progress Report on the Special Programme for Research and Training in Tropical Diseases, to be taken

late in the afternoon on the first day, and item 6.7, Involvement of ACMR Members in WHO research activities, to be taken early on the first day before items 6.3, 6.4 and 6.6.

Agenda item 5: Progress reports of action taken on suggestions and recommendations made by ACMR at its eighteenth session

The ACMR took note with appreciation of those reports. WHO's collaborative research in health education for the promotion of health delivery and in the ethics of medical experimentation involving human subjects were further discussed.

1. Contribution of WHO's collaborative research in health education for the promotion of health delivery

Concern was expressed that experiments in health care should be part of an overall strategy for the delivery of health services. Moreover, poorly designed and uncoordinated experiments may give rise to misleading conclusions. The importance of good operational research on health education in this area was noted. It was noted that WHO offered research advice on health education to a number of institutions, and that health education, to be effective, must involve the entire community.

2. Ethics of medical experimentation involving human subjects

An account of the collaborative efforts on biomedical ethics between the ACMR and the Council for International Organizations of Medical Sciences (CIOMS) was given by Professor W. J. Curran, Chairman, CIOMS Advisory Committee on Bioethics.

Collaboration began in November 1976 after the CIOMS General Assembly and following an extensive consultation held on this occasion between representatives of WHO, the ACMR, and CIOMS on the modalities of increased cooperation. The General Assembly approved a project for an Ethical Review Committee for Biomedical Research Involving Human Subjects, designed to explore developments around the world in the setting up of mechanisms for the ethical review of research involving human subjects. The aims of the project were:

- (1) to review experience in countries which have established ethical committees;
- (2) to report on a comparative analysis of the structure of the committees, functions of committees, etc.;
- (3) to act as secretariat to help countries and research facilities to establish ethical committees if so desired;
- (4) to prepare new guidelines for the proper function of committees and to develop flexible criteria for the review of individual research projects, taking into consideration regional and local differences.

Professor Curran informed the ACMR of the following developments:

- (a) a world-wide advisory committee of 14 members had been formed and a membership list was provided to the ACMR;
- (b) funds had been procured for pilot exploration and work of an advisory committee from UNESCO and the Sandoz Foundation;
- (c) professional part-time staff had been recruited and a secretariat is assured by CIOMS in Geneva;

- (d) contact had been established with several countries which have formally structured ethical review committees, in Europe (France, Ireland, Sweden, Switzerland and United Kingdom), North America (Canada and USA) and the Western Pacific (Australia and New Zealand);
- (e) detailed questionnaires and interview protocols were shortly to be sent to existing ethical committees, and site visits to selected countries were being planned.

During the discussion of Professor Curran's report, the following issues were noted:

- (1) The validity of delegation of informed consent to a community leader, spouse or parent. This will be an important issue in many vaccination trials.
- (2) The breadth of viewpoint included in the membership of local and national committees to review ethical considerations in human research. The importance of including non-medical members was stressed and specifically women on committees reviewing research projects involving women or children.
- (3) The responsibility of a national committee on ethics for research to be carried out in other countries by its nationals or with the support of its funds. Guidelines are required which protect the citizens of other countries from possible exploitation by foreign groups or multinational corporations but which preserve flexibility of national response in accordance with differences in risk-benefit ratios for different problems and different degrees of risk.
- (4) The importance of emphasizing the ethical aspects of human research as well as health care in the education of all health science personnel. The need for general principles, specific guidelines and a body of experience for use in the education process was noted.
- (5) The importance to WHO, in terms of review of its own research projects, of having ethics review mechanisms established in each of the countries where research involving human subjects will be carried out.

Further consideration should be given to the mechanisms to facilitate the ethical review of international research projects where appropriate and to mechanisms for monitoring compliance with ethical requirements after the initial review.

The ACMR during its 1976 meeting considered the establishment of a subcommittee on ethics of human research. Since then close collaboration has been established between WHO and CIOMS. A separate ACMR subcommittee does not seem to be required, but it is recommended that the Chairman of the CIOMS Advisory Committee on Bioethics be invited regularly to present progress reports to the ACMR and that the CIOMS Advisory Committee on Bioethics should continue to include ACMR members. The Committee should be expanded to include members from South-East Asia and Latin America, regions not currently represented on CIOMS. WHO should explore mechanisms to provide support for the continuing activities of CIOMS concerned with the ethics of human research.

Agenda item 6: WHO's role in the development and coordination of biomedical and health services research

Agenda item 6.1: Report submitted to the Executive Board at its fifty-ninth session, and to the Thirtieth World Health Assembly in January and May 1977 respectively

The Committee considered the report on "The Development and Coordination of Biomedical and Health Services Research" and noted with appreciation the resolution¹ of the Thirtieth World Health Assembly on the subject, endorsing:

¹ Resolution WHA30.40.

- (a) the role of WHO in strengthening national research capabilities, promoting international cooperation, and ensuring the appropriate transfer of existing and new scientific knowledge to those who need it;
- (b) the emphasis on greater regional involvement in research, with the active participation of Regional Advisory Committees on Medical Research;
- (c) the setting of research goals and priorities in the regions in response to the expressed needs of Member States;
- (d) the concept of Special Programmes for Research and Training in major mission-oriented programmes of the Organization; and
- (e) the keeping of an appropriate balance between biomedical and health services research.

The setting up of Regional Advisory Committees on Medical Research in pursuance of an earlier resolution of the World Health Assembly had in fact been a major step towards promoting greater regional involvement in medical research and in defining research goals and priorities in response to the expressed needs of Member States.

With regard to paragraph (e) above, the ACMR noted the increasing interaction and coordination between biomedical and health services research. This is producing a partnership with mutual benefit by directing biomedical research to problems of relevance to health services delivery and can in turn make use of opportunities for the practical application of its results.

In trying to meet a specific health need a properly designed research programme might contain basic laboratory and clinical sciences and technical development, but should always also include behavioural and operational research.

The Committee also welcomed the attention drawn by the Thirtieth World Health Assembly's resolution to the need to strengthen further the research development and coordination mechanisms outlined in the report, and fully endorsed the view that in any such programme for additional strengthening of research efforts of WHO, major emphasis should be laid on close coordination between the regional and the global ACMRs in the long-term planning and development of the WHO Research Programme, and on collaboration with Medical Research Councils or analogous national research bodies to ensure effective coordination of national, regional and global research programmes.

The Committee noted the request to the Director-General, contained in the resolution, to further elaborate the WHO long-term programme in the field of development and coordination of research, taking into account the suggestions of the WHO regions, the global ACMR and the RACMRs. The Committee welcomed the proposal of the Director-General to select from among present and past members of the ACMR a small group to take an in-depth look at the evolution of WHO's research programme and to work with other appropriate bodies of WHO towards formulating the most effective way for WHO to meet the needs of the Member States in the coordination and promotion of research. The Committee recognized that the World Health Assembly had emphasized in its resolution that in the formulation of such a policy the WHO regions and the RACMRs should be fully consulted and their suggestions taken into account.

In the view of the ACMR, the objective of the above efforts is not to prepare or to propose a complete compendium or catalogue of ongoing research programmes being undertaken by WHO or others but critically to evaluate the strategy for the promotion and coordination of research pursued so far and to suggest appropriate modifications of the strategy in the light of experience and in the context of new developments such as the emergence of the Regional Advisory Committees for Medical Research.

The ACMR expressed its satisfaction at the development of the WHO Special Programme for Research and Training in Tropical Diseases. While welcoming the proposal for the setting up of a Special Programme in Health Services Research, it noted that the Thirtieth World Health Assembly had also recommended the strengthening of research in nutrition, directed towards the goal of eliminating at least the florid forms of malnutrition such as kwashiorkor, marasmus and keratomalacia as public health problems by the turn of the century. The Committee felt that it was necessary to build a nutrition component into the major ongoing research programmes such as the Special Programme for Research and Training in Tropical Diseases, the Onchocerciasis Programme and the Special Programme of Research, Development and Research Training in Human Reproduction. The Committee noted that although such a view had been repeatedly expressed in the past by the ACMR, nutrition seems to have been neglected in the actual implementation of these programmes.

The need for special extrabudgetary support in the field of nutrition was also emphasized. A special fund for nutrition research would facilitate its introduction into programmes at national and regional levels, and would assist WHO units and special programmes in incorporating an appropriate nutritional component into their own research activities. It was pointed out that even in the context of current social and economic constraints and with the current levels of food availability, there was considerable opportunity for the improvement of the nutritional status of poor rural communities through programmes in the health sector.

Agenda item 6.2: Greater regional involvement in research (reports by Chairmen of RACMRs)

1. Introduction

The ACMR received reports from the RACMRs presented by their Chairmen, outlining their activities. Members of the ACMR welcomed the reports and noted with satisfaction the significant progress in the planning and implementation of research activities which has occurred in the regions.

2. Organization of research at the regional level

The ACMR noted the terms of reference of the RACMRs and expressed appreciation of the significant representation within them of scientists involved in institutional, national and subregional research decisions. The close relationship between the councils, academies and agencies responsible for national research planning and implementation and the development of regional research priorities and activities was felt to be of great benefit to the development and coordination of the regional programmes of research.

3. Resources for research

3.1 The critical importance of national research manpower and of the strengthening of national research capabilities was noted. Each RACMR is in the process of assessing the manpower available as well as the research manpower requirements at both national and regional levels. The completion of these assessments will require considerable intra- and interregional collaboration as well as assistance and guidance from the global ACMR.

3.2 Institutional resources

The central role of existing national research institutions and coordinating bodies was stressed by the Regional Chairmen and recognized by the ACMR. The identification and assessment of these institutions has been begun by the RACMRs. National agencies and intraregional research organizations are collaborating in this process. The global ACMR could provide a basis for evaluating and strengthening existing institutions, as well as encouraging collaboration with them.

3.3 Financial resources

The regions reported a variety of approaches to provide the funds required for research. Each region places major emphasis upon the promotion of collaborative research with the national institutions and programmes as well as the focusing of bilateral and non-WHO multilateral research funds upon high-priority research activities. Some regions are allocating a portion of their regular budgets for the support of research. All regions hope to obtain extrabudgetary funds using both intraregional and global approaches to raise these funds. While the total level of funding for research and research training remains low, WHO funds very often catalyse other sources of support for priority research activities.

4. Research priorities

Provisional research priorities have been set in each of the regions. However, the data upon which the priority decisions were made are incomplete, and the regions expressed a need for strengthening national data collection, information on ongoing and planned research activities, and on health information systems to provide adequate information upon which to base their decisions for research priorities and planning. All regions identified health services research as a priority. Health manpower, tropical and other communicable diseases, as well as nutrition, are also of high priority in most regions.

5. Implementation of research activities

The regions are developing mechanisms to implement their research and training activities. Some mechanisms such as task forces and study groups are common to a number of regions. Some regions have chosen to concentrate upon a few priority areas, while others are taking a more broadly based approach. All are urged to establish their own procedures for peer review of research proposals and for evaluating continuing and completed projects, if they have not already done so.

6. The relationship between the regional and global ACMRs

Both the global and regional ACMRs felt that overlapping membership between them was a useful coordinating mechanism. In some regions members of the global ACMR automatically become members of the RACMR. The attendance of the Chairman or members of each RACMR at global ACMR meetings, as well as the attendance of members of the global ACMR at the RACMR meetings, are desirable, and as the research programmes develop in the regions, other coordinating mechanisms among the ACMRs will evolve.

Agenda item 6.3: Problems of research information

Some aspects of the role of WHO in the provision and collection of research information were reviewed in the context of the explosive increase in research data, as shown, for example, by the doubling of the number of scientific journals every 15 years and the increasing costs of the services offered. Such information as has been provided by WHO for Member States was valuable, among other things, for setting priorities, rationalizing the allocation of health manpower, promoting the awareness of new technology for the delivery of health care, and defining areas where further research was needed. These advantages are, however, offset by the high cost to WHO of an extensive information or bibliographic retrieval service such as Medline and Medlars. The ACMR was informed that WHO was planning to discontinue its headquarters computer services in this area, and to purchase them from other Medlars centres for those developing countries which could not otherwise obtain them. The ACMR expressed the view that services such as those provided by Medline and Medlars are of considerable value, and strongly endorsed plans for their continuation on behalf of developing countries, and for their availability to all WHO staff members. Information on this matter should be widely disseminated through the WHO regional offices, RACMRs and scientific journals.

Collation and dissemination of information by such mechanisms as registries, documentation centres, bibliographic retrieval, institutional and scientific profiles and scientific meetings should be organized at national and regional levels also. WHO should play an important role in this process. It was felt that such early information is necessary for a more coordinated planning of research programmes. This process will require considerable organization, and the experience already acquired by regional and national institutions should be utilized. It is very desirable, for optimum usefulness of the service, that uniform and standardized methodology and protocols be developed. It was noted that further advances in the automated provision of research information are anticipated and that WHO must keep abreast of these developments. The ACMR felt that WHO should study the feasibility of providing health information about ongoing and planned research activities, as well as for coordination with other research information systems. The important role of national counterpart systems was emphasized. The ACMR felt that the whole question of the needs and availability of information and library facilities in the Member countries should be studied by the RACMRs for future deliberation by the global ACMR.

Agenda item 6.4: Health services research

1. Introduction

The ACMR considered the report of a Consultation on Health Services Research which took place from 8 to 10 June 1977.¹

¹ The participants were:

ACMR Members

Professor S. Bergström (10th only), Professor of Biochemistry, Karolinska Institute, Stockholm, Sweden

Dr Fang Chi, Deputy Chief and Associate Professor, Department of Internal Medicine, Capital Hospital, and Deputy Director, Capital Hospital, Chinese Academy of Medical Sciences, Peking, China

Professor K. Winter, Director, Institute of Hygiene and Social Medicine, Berlin, German Democratic Republic

Temporary Advisers

Dr R. Andreano, Madison, WI, USA

Professor D. Banerji, Chairman, Centre of Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi, India

Ms R. Nita Barrow (Chairman), Director, Christian Medical Commission, World Council of Churches, Geneva, Switzerland

Professor K. W. Newell (Rapporteur), Department of Community Health, Clinical School, Wellington Hospital, Wellington, New Zealand

Dr V. Sidel, Professor and Chairman, Department of Social Medicine, Montefiore Hospital and Medical Center, Albert Einstein College of Medicine, Bronx, NY, USA

Dr J. Sulianti Saroso, Head, National Institute of Health Research and Development, Ministry of Health, Jakarta, Indonesia

Dr M. Testa, Visiting Professor, Metropolitan University, Mexico, D.F., Mexico

Dr F. Wurapa, Department of Community Health, University of Ghana Medical School, Accra, Ghana

WHO Secretariat

Dr A. Arata, Dr N. T. J. Bailey, Dr M. Behar, Mr A. Esterman, Dr F. M. Katz, Dr B. Kleczkowski, Dr Kuo-pin Liu, Dr E. de Maar, Dr A. Noguer, Dr I. Pustovoj, Dr D. Ray, Dr A. Rossi-Espagnet (Secretary), Mrs G. Standley, Dr J. Stromberg, Dr I. Tabibzadeh, Dr D. Tejada-de-Rivero, Dr M. Torfs, Dr V. B. Vouk, Dr R. Wilson, Dr A. Zahra.

The ACMR reaffirmed the urgent need for a major increase in Health Services Research (HSR) as expressed by the World Health Assembly, the Executive Board and at previous sessions of the ACMR and RACMRs. Members of the ACMR specifically discussed the needs for HSR in areas such as nutrition, maternal and child health, family planning, primary health care, immunization, community water supplies and health manpower development and the need for research on how to introduce the knowledge gained by biomedical research into health services practice. Examples cited included the low level of immunization and the low level of compliance with medical recommendations in many countries. Coordination of HSR activities within WHO for the common purpose of improving health services was felt to be of high priority. Funds and training facilities are needed to develop competent HSR manpower and to support HSR projects in the countries.

2. Principles

The ACMR recognized that the following principles should underlie the effort in HSR:

- (a) health workers and policy-makers directly involved in the delivery of health services should play a major role in setting priorities for HSR and in its implementation;
- (b) the bulk of the HSR effort, including collection of information, problem identification, priority setting and implementation, should be decentralized to the regions, to Member States, and to local programmes within countries, and the global programme should be a synthesis of regional programmes;
- (c) implementation of these principles requires a specific WHO programmatic commitment to and structure for HSR and the development of a unique coordinated operational and training programme;
- (d) HSR should be an integral component of all health services development programmes and of all special WHO research programmes.

3. Recommendations

3.1 Development of a special programme in HSR

- (a) Immediate formation by the Director-General within WHO of a planning group with adequate representation from the regions and a full-time secretariat to formulate a special programme in HSR. This group should have:
 - (i) clearly identified tasks;
 - (ii) a realistic time-frame;
 - (iii) adequate resources.
- (b) The tasks of this group might include activities such as:
 - (i) collection of information on the activities of the regional ACMRs and related task forces in the area of HSR;
 - (ii) assessment of current WHO activities in HSR and of national activities in HSR in which WHO collaborates;
 - (iii) collation of information on national activities and national capabilities in HSR obtained from countries by the regional offices;

- (iv) indication of priorities for future WHO activities in HSR based on analysis of country needs as expressed by the countries and by the regional ACMRs and task forces; this could be based, among other factors, on the frequency with which a problem is identified by the countries;
 - (v) formulation of a special programme for WHO activities in HSR, including the development of a plan of action with identification of training needs (the methodology available for medium-term programming should be followed);
 - (vi) preparation of background material for a meeting of donor agencies to be convened by the Director-General to seek funds for implementing the special programme and supporting HSR in countries;
 - (vii) implementation of the special programme. It is clear that the implementation of the programme will be a decentralized one with well-identified global functions performed centrally (regional offices, headquarters). These may include mobilization of extrabudgetary resources, methodological improvements, interregional communication and coordination, dissemination of information, etc.;
 - (viii) keeping the RACMRs and their task forces on HSR fully informed of the progress of the planning.
- (c) A suggested time frame for these tasks should include:
- (i) preparation of an initial report within four months from regions which have not already provided such a report, identifying a number of research projects suitable for early implementation;
 - (ii) draft of a plan for the special programme within six months and circulation of the plan to potential donors;
 - (iii) donors' meeting within 12 months (before the next session of the ACMR);
 - (iv) initiation of the special programme on HSR within 18 months.
- (d) Financial resources for this WHO planning group should be adequate to implement the following:
- (i) recruit temporary advisers on a full-time basis for the required period of time;
 - (ii) arrange meetings with regional and country representatives;
 - (iii) perform site visits;
 - (iv) undertake information processing and analysis;
 - (v) prepare the report.

3.2 Strengthening current WHO efforts in HSR

While this will be one of the tasks of the special programme on HSR once it is established, it is important that existing technical programmes consider the strengthening of their HSR efforts immediately. The current work on HSR in the regions should be encouraged, further supported, and strengthened.

Agenda item 6.5: Progress report on the Special Programme for Research and Training in Tropical Diseases

The ACMR received the progress report, amplified by opening remarks of the Director of the Programme.

The ACMR noted with satisfaction the developments in the Special Programme in the past year and especially the success of the meeting in December 1976. Approximately \$ 10 million had been pledged to begin Programme operations.

The ACMR approved the very active development of the Programme on the lines endorsed by ACMR at its eighteenth session in 1976. The progress over the past three years of the Scientific Working Group on the Immunology of Leprosy illustrated the success of the Scientific Working Group approach associated with a peer review system. The report indicates that similar activities have now begun in other fields according to the proposed Programme timetable.

The ACMR noted the many different reports which the Special Programme will provide to various bodies, including its Joint Coordinating Board (JCB) and Scientific and Technical Advisory Committee (STAC) and RACMRs and the global ACMR. A streamlined system of reporting should be devised now that the Special Programme is entering into full operation.

It was proposed that at least one ACMR member should be an ex officio member of the STAC of the Special Programme with the responsibility of reporting on Programme activities to the ACMR. Similar arrangements might be useful in other similar cases.

The importance of nutritional studies for many facets of the Programme was re-emphasized. Nutritional deficiencies could adversely influence both humoral and cell-mediated immunity and the effectiveness of drugs, vaccines and other control measures developed by the Programme. The Committee suggested that nutritional research be included in the Programme in such areas as immunology and epidemiology, operational research and cost benefit analysis.

The Committee emphasized the importance of the rapid development of a network of collaborating laboratories, clinics and centres in tropical countries to participate in the Programme and to strengthen national research competence. They stressed the importance of close collaboration with the RACMRs on this question and noted that the Research Capability Strengthening Working Group (RCSWG) would be the focal point for this development.

Finally, the Committee re-emphasized that the basic rationale of the Programme was to bring modern scientific knowledge and methodology to bear upon the development of methods to control tropical diseases. They noted the links between biomedical sciences and disease control problems which had already been established in the disease-oriented Scientific Working Groups (SWGs). They recommended the early activation of a Scientific Working Group on Biomedical Sciences. This group should include a "core group" of basic scientists already involved in the disease-oriented SWGs who, with other colleagues, would identify areas of common scientific interest that would benefit from an examination by experts drawn widely from biomedical fields (e.g., receptors, membranes, lysosomal activities).

In this way it is hoped to stimulate and expand interest in the problems of the Special Programme among the scientific community at large.

Agenda item 6.6: Developments relating to the problem of safety in the handling of microorganisms and cells employed in research and in public health practice

The ACMR received the report of a pre-ACMR meeting¹ on the above subject, and endorsed the broad outlines of the report. The ACMR reaffirmed that WHO has a global responsibility for safety measures in microbiology, and that the issue of recombinant DNA research is only a part of a much larger problem area. One useful outcome of the recombinant DNA controversy was that it had focused attention on the field of laboratory safety as a whole.

¹ The participants were:

ACMR Members

Professor O. G. Andžaparidze, Member of the Academy of Medical Sciences of the USSR and Director, Moscow Institute for Research on Virus Preparations, Moscow, USSR

Professor S. Bergström, Professor of Biochemistry, Karolinska Institute, Stockholm, Sweden

Professeur R. M. Fauve, Département de Biologie moléculaire, Institut Pasteur, Paris, France

Sir Gustav Nossal, Director, The Walter and Eliza Hall Institute of Medical Research, Melbourne, Victoria, Australia (Chairman)

Temporary Advisers

Dr M. M. Kaplan, Director-General, Pugwash Conferences on Science and World Affairs, Geneva, Switzerland

Dr V. Sgaramella, Laboratorio di Genetica, Biochimica ed Evoluzionistica del Consiglio Nazionale delle Ricerche, Pavia, and Professor of Molecular Biology, University of Milan, Italy

Dr J. E. M. Whitehead, Deputy Director, Public Health Laboratory Service, Colindale Hospital, London, United Kingdom

Representatives from other Organizations

Dr Z. Bankowski, Executive Secretary, Council for International Organizations of Medical Sciences, Geneva, Switzerland

Dr W. Emmett Barkley, Director, Office of Research Safety, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA

Miss S. Coates, Committee on Recombinant DNA Molecules, European Science Foundation, Strasbourg, France

Dr J. Tooze, Secretary, Committee on Genetic Experimentation, International Council of Scientific Unions and Executive Secretary, European Molecular Biology Organization, Heidelberg, Federal Republic of Germany

WHO Secretariat

Dr K. Bögel; Dr H. C. Goodman

In commending a continued strong involvement of the secretariat in this field, the ACMR made the following points:

1. Public health aspects, rather than detailed technical guidelines for specific research projects, should be WHO's chief concern.
2. The need for adequate training of laboratory personnel in safe handling of microbiological materials was stressed.
3. Monitoring of the health of laboratory workers is an issue in which WHO may become involved, and the secretariat should closely follow national initiatives in this regard. Research on the monitoring technology itself will be important.
4. The strong action for improvement in the safety of shipment of infectious agents was warmly endorsed.
5. WHO documents in the general area of genetic research should avoid the word "engineering", which has emotional overtones, and should stress the great contributions which genetics has already made and continues to make to human knowledge and medical science.
6. The collaboration with other organizations interested in the recombinant DNA field was a most valuable aspect of the pre-ACMR meeting. Specifically, it may open possibilities of strengthening the WHO Secretariat with a full-time staff member seconded from a Member State.
7. Early publication and wide distribution of the proposed brochure on genetic research was recommended.
8. Special attention should be given to international cooperation in contingency planning for emergency situations arising out of laboratory or transport-associated accidents.

The following recommendations, including a plan of work for 1977/78, arising from the pre-ACMR meeting, were endorsed:

Specific recommendations for a WHO policy on genetic research

- 1.1 Research activity in the field of genetics should be encouraged, on account of its potential benefits to many areas of medical and agricultural science. However, genetic and microbiological research should be carried out with stringent and effective safeguards.
- 1.2 Member countries should be fully informed of the wide-ranging potentialities of genetic research, particularly with respect to health and nutrition problems of the developing countries.
- 1.3 Because of the conjectural risks associated with recombinant DNA research, authorities should ensure that all appropriate steps are being taken for the protection of research workers and the public.
- 1.4 National expert committees should be created under the aegis of the appropriate authorities. The committees should include geneticists, microbiologists, molecular biologists, epidemiologists, ecologists, lawyers and representatives of those responsible for research funding and for industrial application.
- 1.5 The immediate task of the national committees should be the establishment of registers of all research and production activities in genetic modification.

1.6 The national committees, when appropriate, should elaborate guidelines for those activities. In particular:

- (a) projects involving organisms or cells derived by genetic modification technologies should be submitted to the committee. Where appropriate, licensing of institutions should be considered
- (b) its examination procedures should give consideration to the importance of confidentiality;
- (c) the committee should make sure that both laboratory personnel and facilities are adequate for the safe performance of the proposed work;
- (d) local biological safety officers should be nominated and trained to assist local safety committees so that compliance with the regulations by all workers involved is ensured;
- (e) responsibility for damage to people and property should be clearly attributable.
- (f) plans should be developed to cope with laboratory-associated accidents;
- (g) proper consideration should be given to relevant safety regulations in handling and shipment of infective substances;
- (h) ethical considerations should be kept in mind, and appropriate liaison with ethical committees established.

1.7 The national committees should also give prompt and thorough attention to the assessment of the risks and to their minimization, for example, through the characterization, development and use of biologically harmless or disabled host-vector systems that are made freely available.

1.8 Equal attention should be given to the exploitation of the potential benefits, with particular emphasis on the biomedical and agricultural needs of developing countries.

1.9 The safety problems, like the potential benefits, are of international concern. Representatives of national committees and other interested bodies should be convened periodically under the aegis of WHO to compare their problems and share their experience. Among the results of these meetings could be an international forum for discussing national guidelines and regulations, and the organization of training courses.

Recommendations concerning public health aspects of microbiological safety

2.1 The draft brochure for public health services on the implications of work involving new genetic combinations should be modified as proposed and should be printed during 1977.

2.2 Position documents should be prepared for the ACMR 1978 on the attempts to assess the risks, now still conjectural, of recombinant DNA research and on the measures taken by Member States to license or register laboratories or research projects not only involving genetic engineering but highly pathogenic organisms in general.

2.3 The proposed Lorenzini Foundation/WHO Symposium on Practical Application of Genetic Engineering should be organized in such a way that a continuing cooperation of industries towards a common code of practice could be expected as a major result.

2.4 WHO should keep Member States informed of the progress made by the ICSU Committee on Genetic Experimentation (COGENE) in the areas of risk assessment, comparison of national guidelines for safe experimentation, and training of research workers and safety officers.

2.5 The Committee stressed the need for more adequate laboratory safety elements (staff, facilities and equipment) in microbiological practice since the professional disciplines working with pathogenic organisms are increasing, often without proper training in safety measures and supervision. WHO's role, particularly with respect to the promotion of research in developing countries, is evident. The international working group for laboratory safety elements should further aim, therefore, to promote the implementation of codes of practice and technical cooperation in the organization of laboratory safety services and in the training of safety officers and research workers at the national level.

2.6 The secretariat should also place further emphasis on technical cooperation for emergency plans and services in case of laboratory- and transport-associated accidents. The international working group established within the Special Programme for the development of emergency services should receive full support and prepare draft guidelines and its detailed plan of work for a three-year period in collaboration with the working group for laboratory safety elements.

2.7 The Committee endorsed the proposal of the secretariat to review the Special Programme at consultations in 1978. For this purpose, a Board for the programme should comprise two ex-officio ACMR members, the presently acting Chairman, and the four heads of the international working groups. This Board could in future replace the ACMR Sub-Committee which finds it almost impossible to give appropriate guidance for a Special Programme of the magnitude now attained in the short time available. The Board would have the functions of "advisory committee" and "steering group" recommended in previous reports and should ensure the cooperation of all interested governmental and non-governmental international organizations.

2.8 In the area of recombinant DNA research, various national and international institutions have now become active. Their activities concern research coordination, application of the new technology, comparison and harmonization of safety guidelines, assessment of risks, ethical problems, etc. Important conclusions can be expected during the next two years. WHO should begin to explore, therefore, the possibility of a comprehensive symposium with all organizations involved in these subjects (e.g. FAO, ILO, UNEP, UNESCO, the International Council of Scientific Unions (ICSU), the European Molecular Biology Organization (EMBO), the European Science Foundation (ESF) and leading national committees) in order to assess the potential benefits and the conjectural risks of recombinant DNA research.

2.9 The Committee noted with appreciation that NIH (USA) has developed a mechanism for the international exchange of memoranda between experts involved in recombinant DNA research. WHO should investigate the possibility of cooperating with such services and resources available at the national level in order to establish an exchange of safety information concerning the whole field of microbiology for research workers and public health services.

2.10 All the aforementioned activities are essentially part of technical cooperation with developing countries to advance their microbiological research and practice. It would be advisable, therefore, if very close ties could be established between the Special Programmes for Research and Training in Tropical Diseases and for Safety Measures in Microbiology.

2.11 The Special Programme on Safety Measures in Microbiology has rapidly reached a magnitude which calls for increased secretariat support particularly because of its importance for developing as well as industrialized countries. It is the conviction of the ACMR that the rapid progress made is due not only to the competent coordination through its secretary, but also to the apparent need of this Special Programme to meet the most urgent needs of Member States in an area which, as historically seen, has been unchecked for many decades and now has become a prominent problem.

The ACMR concluded that it is impossible for WHO to discharge its heavy responsibilities in this area with the limited staff and funds so far allocated. The Committee recommends to the Director-General that consideration should be given to the obvious need of the Special Programme for a full-time staff member or for a full-time epidemiologist/microbiologist seconded for a period of at least one year by a country closely participating in this Special Programme. Furthermore, WHO should explore the possibility of contractual technical agreements in order to carry out various components of the programme.

Agenda item 6.7: Involvement of ACMR Members in WHO research activities

Verbal reports were given by several ACMR members on their active participation in the implementation and promotion of WHO's research activities during the year. This participation, including consultation during a full sabbatical year, attendance at various meetings, and visits to research institutions giving advice and helping strengthen research capacities of the developing countries, had been most useful to the Organization.

The ACMR welcomed the active role that its members had been playing in research promotion and development, and suggested that it should be continued and expanded as far as possible.

Agenda item 7: Review in plenary session of selected research programmes and subjects

Agenda item 7.1: Importance and research potentialities of cancer chemotherapy for developing countries

The Committee reviewed the working document entitled, "The importance and research potentialities of cancer chemotherapy for developing countries", prepared by Dr C. Olweny¹ and Dr S. Eckhardt.²

From the available evidence it was obvious that cancer is increasing in importance as a cause of death in developing countries. In some countries it usually affects young people and kills rapidly. In comparison with malignant tumours in developed countries, cancer in developing countries differs not only in genesis, type and site, but also in epidemiological pattern.

Treatment facilities are limited in developing countries, and in many areas radiotherapy does not exist. Moreover, patients usually present themselves with advanced tumours. It is therefore important for developing countries to work out their own strategies and research programmes. This, however, should not be done in complete isolation from international activities. Since radiotherapy requires costly equipment and highly trained manpower, chemotherapy may be favoured, especially in those countries of the developing world where drug-sensitive tumours are common.

Chemotherapy has its limitations. The drugs are costly and are not readily available. In addition, there is usually a lack of facilities to protect patients against and cope with drug toxicity; and often, the personnel have not been properly trained. In order to overcome these difficulties, it is necessary to strengthen the existing clinical centres and set up new ones, to ensure the training of both medical and paramedical personnel, and to update available knowledge and textbooks on chemotherapy. Moreover, adequate quantities of drugs must be available and their cost must be lowered. Follow-up of patients should be ensured.

For long-term policy, epidemiological research and data base and health information services have to be supported and strengthened in developing countries in order to provide the information necessary for planning cancer control services and identifying priorities for further research.

¹ Director, Uganda Cancer Institute, Kampala, Uganda (WHO Consultant).

² Director, National Institute of Oncology, Budapest, Hungary (WHO Consultant).

Research potentialities in developing countries are numerous. Instead of the random screening of plants, one rational approach would be to carry out a preliminary selection based on plants claimed to be empirically effective in traditional medical practice. This would also be a source for non-cytostatic drugs. The extraction of the active principle should be performed on the spot. By these means, active local participation in cancer research could be promoted and the potential loss of activity during shipment of plants avoided. The active participation in phase I, II and III studies carried out with drugs from developed countries is also highly recommended.

Cognizant of the above observations, the ACMR recommended the following action by WHO:

- (1) Explore ways and means of making cancer chemotherapy drugs available at reasonable cost for patients in developing countries.
- (2) Strengthen the existing cancer control services in developing countries and advise on the establishment of new ones whenever this is necessary.
- (3) Update the available knowledge, on a regular basis, including the WHO textbook on cancer chemotherapy,¹ and give special emphasis to conditions pertaining to the developing countries.
- (4) Assist in the training of medical and paramedical personnel in the field of cancer chemotherapy. In this regard the inclusion of oncology in the curricula of the various training programmes would be highly desirable.
- (5) Encourage and stimulate on-the-spot rational screening of drugs used in traditional medicine, with the view to establishing their cytostatic and other activities. This could be linked with the WHO research activities on tropical diseases, when in this connection plants are being screened for their activities in other diseases.

Agenda item 7.2: Research and development in the Expanded Programme on Immunization

The ACMR endorsed the priority being accorded to the Expanded Programme on Immunization by the World Health Assembly resolution WHA30.53 and to the goal of providing immunizations for all children of the world by 1990.

Suggestions and comments included the following:

- (a) In order to achieve the Programme's goal, adequate monetary resources should be mobilized, and health services must be developed appropriate to the needs of the communities they serve. Given such resources, however, changed value systems will be required if all countries are to build the health services delivery programmes necessary for success, and WHO should be active in promoting such changes.
- (b) In order to reduce the need for "booster" immunizations, WHO should recognize the potential for improving adjuvants, such as those releasing the antigens slowly from biodegradable substrates.
- (c) While striving to improve the technology and performance associated with maintaining a satisfactory "cold chain", WHO should strongly encourage work on improving vaccine stability, noting, in particular, the potential for improved lyophilization techniques. The importance of the problem is underlined by the frequency with which measles is reported among immunized children; these cases not only represent a waste of resources but may also undermine public confidence in other immunization programmes.

¹ Brulé, S. J. et al. Drug Therapy of Cancer. Geneva, World Health Organization, 1973.

(d) Vaccine research should include efforts to improve existing vaccines (pertussis was noted as an example), as well as looking for new ones. In both instances, more basic research is needed. One poorly understood and particularly important phenomenon is the immunology of organisms such as mycobacteria and salmonella that may survive ingestion by phagocytic cells. In this field, particularly, a close cooperation and integration where possible with the Tropical Disease Research Programme is recommended.

(e) It was emphasized that good nutrition improves the body's defences against infectious disease, and that breast feeding provides both nutrients and maternal antibodies. WHO should emphasize that malnutrition is not a contraindication to vaccination.

(f) A strong scientific basis is needed for clear and unambiguous official recommendations concerning vaccination schedules. Changes in the organizational and technical aspects of the Expanded Programme on Immunization should not be made without clear and confirmed justifications based on adequate laboratory and field data. DPT immunization schedules were cited as an example where the potential for confusion exists.

(g) Further behavioural research is urgently required to help identify means of improving vaccination coverage rates.

(h) Immunization programmes must be developed as permanent components of basic health services. Surveillance systems must be developed to monitor impact and to stimulate programme improvement. It was recommended that, taking into consideration the above points, WHO should continue to accord the Expanded Programme on Immunization a high priority.

Agenda item 7.3: Diarrhoeal diseases

In research on diarrhoeal diseases, a multidisciplinary approach is essential in order to elucidate the role of many factors including etiological agents, nutrition, immune response, environmental and socioeconomic conditions. There is a need for both basic research and epidemiological and operational studies. Fundamental research could lead to the development of new techniques in prevention or treatment of diarrhoeal diseases, while operational studies would provide guidance on the most effective application of such techniques in large populations.

The Committee emphasized the need for more fundamental research into the nature of intestinal immunity, including the role of intestinal flora and breast-feeding, in order to facilitate the development of new and more potent vaccines against specific diseases such as cholera, typhoid and bacillary dysentery. Studies on the role of food allergies in the causation of diarrhoeal diseases are also necessary.

Investigation of the immune response and phenomena related to immunity in enteric infections may, if pursued vigorously, provide a basis for fresh approaches to the development of new protective agents. Consideration should be given to bacterial adherence, binding of bacterial products to the intestinal cells and the structure and function of cell membrane receptors.

As was pointed out by the South-East Asia RACMR, the goal of immunological studies should be a polyvalent oral vaccine. However, in the absence of such a vaccine, oral rehydration, when feasible, is often one of the most effective methods for managing diarrhoeal diseases. Oral rehydration applied early in the family setting would limit the need for parenteral rehydration. In view of the high incidence of diarrhoeal diseases in developing countries, particularly among children, operational research on simple and inexpensive treatment by auxiliaries or voluntary aides is essential.

Furthermore, behavioural studies are highly relevant to the problem of combating diarrhoeal diseases.

The Committee considered that the interdisciplinary approach to the control of diarrhoeal diseases, through the establishment of interdivisional secretarial groups at regional and headquarters level, was a sound approach and may be preferable to the setting up of a "special programme", although the need for a small, full-time core group seems to be necessary.

The Committee also considered that research should be directed towards the development of simple and widely applicable methods of environmental sanitation, as recommended by the South-East Asia RACMR. The health benefits of environmental measures such as improved water supplies obviously go far beyond the control of diarrhoeal diseases.

The Committee considered the importance of close collaboration with national and international research institutions which have aims similar to WHO. The internationally sponsored Cholera Research Laboratory in Dacca presents a special opportunity and should be encouraged.

The Committee re-emphasized the importance of the recommendations of the Regional ACMRs concerning the problem of diarrhoeal diseases, and particularly the initiative from the South-East Asia RACMR for regional collaboration on epidemiological studies and on methods for wider application of oral rehydration measures.

Agenda item 9: Other business

Agenda item 9.1: Functions of the ACMR and peer review

1. The ACMR reaffirmed the importance of peer review of research projects. Specifically, there should be an external review of all research proposals, and this should take place in addition to any internal WHO review which is undertaken. As the magnitude of WHO-sponsored research expands, consideration should be given to establishing more uniform peer review procedures. In the interim, the Office of Research Promotion and Development should keep abreast of the various WHO methods for peer review and obtain information about peer review procedures utilized in the Regional Offices and selected Member States. The intention of these efforts is to ensure fair, objective, independent assessment of WHO research projects, thus fostering high quality and relevance for WHO.

2. The ACMR can help in these efforts by undertaking, on a rotating and planned schedule, the systematic review of each WHO Division and Special Programme with regard to its research activities and potentialities. In carrying out this review, the ACMR would benefit from background material giving an overview of WHO tasks and directions as provided, for example by:

- (i) addresses and publications of the Director-General and Deputy Director-General;
- (ii) annual reports of the Divisions and of WHO as a whole;
- (iii) annual lists of WHO publications.

3. Within this general framework of knowledge regarding WHO, specific programmes should be reviewed carefully each year. As for the last three years, the ACMR divided into three teams to visit the following divisions:

- (i) Environmental Health (Control of Environmental Pollution and Hazards, Community Water Supply and Sanitation, and Food Safety);
- (ii) Family Health (Maternal and Child Health, and Nutrition);

- (iii) Health Statistics (Development of Health Statistical Services, Health Statistical Methodology, and Dissemination of Statistical Information).

Oral reports were made at a meeting with the Director-General, the Deputy Director-General and the Directors of the Divisions concerned. While the visits were helpful in familiarizing ACMR members with specific programme activities and their research components, it was suggested that future visits be planned in terms of programme areas rather than administrative units. These should be selected in consultation with the ACMR or its Chairman, and appropriate documentation should reach the members well in advance of the meeting. This kind of review would be facilitated by measures such as the following:

- (i) background material about the programme to be reviewed distributed in advance of the ACMR meeting;
- (ii) listing of publications produced by each programme and other key references highly pertinent to the programme;
- (iii) specification of significant overlap between programmes;
- (iv) full opportunity for ACMR members to meet with principal technical staff of the programme;
- (v) Members of the global ACMR might additionally serve as ex officio members of Special Programme Advisory Groups to strengthen coordination.

While these possibilities are purely illustrative, they are intended to convey the desire of the ACMR for a carefully prepared and systematic review of the research aspects of each programme on a regular basis. Thus, the ACMR can help to find ways in which the strengths of the various sciences can be most useful to existing programmes and can identify new directions in which important opportunities for improving the health of the world's population are likely to be found.

The ACMR would appreciate systematic procedures to inform it of the consideration and follow-up of its recommendations of recent years. The present system of reporting only on recommendations of the previous year is not sufficient.

Agenda item 9.2: Strengthening of research collaboration in the neurosciences

1. Brain and nerve dysfunction may be manifested in neurological and mental disorders. The ACMR is impressed with the prevalence of such disorders and with recent advances in the neurosciences; this is consistent with the 1974 discussion of the ACMR on this subject.
2. In an effort to find ways in which these advances may help to ease the burden of neurological and mental disorders, the ACMR suggests that these matters be prepared for the agenda of the 1978 meeting. Relevant topics might include:
 - (i) the nature and extent of neurological disorders in developing countries and practical methods for their management, especially with reference to tropical diseases, including both infectious diseases and malnutrition;
 - (ii) promising directions for manpower development in neurosciences pertinent to these disorders;
 - (iii) research needs and opportunities distinctive to WHO in this field;
 - (iv) interrelations of neurological, behavioural and public health problems.

Agenda item 9.3: Future ACMR meetings

It was agreed that the twentieth meeting of the global ACMR will be held at WHO headquarters in Geneva on 19-23 June 1978. Consideration will be given to appropriate sequencing with other meetings which relate substantially to the global ACMR, e.g. meetings of RACMRs, the Executive Board and the World Health Assembly.

Agenda items 10 and 11: Adoption of the report and closure of the session

The report was adopted.

The Director-General again saluted with appreciation the excellent leadership of Professor Scrimshaw, whose five-year term as Chairman had come to an end. Professor Professor S. Bergström will be the next Chairman.