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**WHO ADVISORY COMMITTEE ON HEALTH RESEARCH
REPORT TO THE DIRECTOR GENERAL**

**Office of Research Coordination
July 1991**

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ADVISORY COMMITTEE ON HEALTH RESEARCH

REPORT TO THE DIRECTOR-GENERAL

on its thirtieth session
 held at WHO headquarters, Geneva
 15-19 October 1990

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LIST OF MEMBERS AND OTHER PARTICIPANTS

Members

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Professor G. Soberon Acevedo, Fundacion Mexicana para la Salud, Presidente Ejecutivo, Mexico City, Mexico (Vice-Chairman)

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Professor A. S. Majali, Director General, National Medical Institution, Amman, Jordan (Chairman, Eastern Mediterranean Advisory Committee on Health Research)

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Professor Y. F. Isakov, Vice-President, USSR Academy of Medical Sciences, Moscow, USSR

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Professor B. O. Osuntokun, Department of Medicine, University of Ibadan, Ibadan, Nigeria

Professor A. Pletscher,* President, National Research Council, Swiss National Science Foundation, Bern, Switzerland

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Representatives from the WHO regional offices

Regional Office for Africa: Dr I. Aleta, Research Promotion and Development

Regional Office for the Americas: Dr A. Pellegrini, Chief, Research Coordination

Regional Office for South-East Asia: Dr U Ko Ko, Regional Director; Dr Aung Than Batu, Director, Research and Health Manpower

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Regional Office for Europe: Dr H. Vuori, Chief, Research Promotion and Development

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Dr M. Abdelmoumène, Deputy Director-General

Mr D. G. Aitken, Assistant Director-General

Dr R. H. Henderson, Assistant Director-General

Dr Hu Ching-li, Assistant Director-General

Dr J.-P. Jardel, Assistant Director-General

Dr N. P. Napalkov, Assistant Director-General

Dr J. Szczerban, Chief, Office of Research Promotion and Development (Secretary)

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Dr T. Godal, Director, Special Programme for Research and Training in Tropical Diseases

Dr J. A. Hashmi, Chief, Research Capability Strengthening, Special Programme for Research and Training in Tropical Diseases

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Dr Y. Nuyens, Responsible Officer, Health Systems Research and Development, Division of Strengthening of Health Services

Mr A. Piel, Director, Programme Development and Monitoring

Dr D. K. Ray, Chief, Office of Governing Bodies and Protocol

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Dr R. Widdus, Programme Officer, Global Programme on AIDS

SUMMARY OF RECOMMENDATIONS

Agenda item

5. ACHR system

5.1 Report by the past Chairman and general discussion:

- ACHR to help in and facilitate the establishment of links between countries, between countries and regional offices and between regional offices themselves in strengthening research capabilities and essential health research activities.
- At country level, coordination perceived as essential between health-research and other health-related institutions.
- On injury research: WHO to assist in disseminating epidemiological data on efficacy and effectiveness of preventive measures.

5.2 Statements by the Chairmen of the regional ACHRs:

- At country level, pressing need to establish medical research councils or analogous bodies, to improve research capacity, and to cooperate with regional ACHRs.
- At ACHR level; better coordination between regional ACHRs and between regional ACHRs and the global ACHR through the standing committee.

5.3 Interim report by the Chairman of the ACHR subcommittee on health and the economy:

- Plan of work of the subcommittee endorsed on the basis of the Chairman's report.

6. Follow-up and implications for the Organization's programme of the Technical Discussions at the Forty-third World Health Assembly:

- ACHR accepted responsibility to oversee the follow-up and implementation of resolution WHA43.19.

Three task forces and one subcommittee proposed on:

- (i) Task force on health development research
(Task force coordinator: Professor A. M. Davies)
- (ii) Task force on investigation of evolving problems of critical significance to health
(Task force coordinator: Professor T. M. Fliedner)
- (iii) Task force on monitoring of emerging areas in science and technology
(Task force coordinator: Professor B. McA. Sayers)
- (iv) Subcommittee on research capability strengthening
(Subcommittee Chairman: Professor M. Gabr)

- Standing committee: in order to maintain continuity of ACHR work, a standing committee composed of the Chairman, the Vice-Chairmen, former Chairman and Rapporteur, with delegated authority, was established.

7. Mechanisms for the acquisition of scientific and technological advice in WHO: overview of potential developments:
 - Need for coordination, communication and harmonization of the various WHO scientific activities.
 - The needs of WHO programmes for scientific input must be defined, and optimal strategies for the transfer of science and technology within programmes and to countries must be determined.
 - A working group composed of Professor Gabr, Professor Osuntokun and Professor Ramalingaswami to be set up to advise on the harmonization of mechanisms for the acquisition and transfer of scientific and technological advice within WHO, as well as between WHO and other organizations.
8. Communication on current activities of CIOMS
 - Full support to CIOMS activities and appreciation of their ever increasing role in the ethical implications of new advances in science and technology.
9. Future ACHR initiatives (see 6 above)
10. Other business
 - Mainly focused on the activities of the three task forces and the subcommittee, mentioned under 6 above. The Office of Research Promotion and Development will act as secretariat and coordinator for the groups and the subcommittee.
 - The standing committee of ACHR authorized to act on behalf of the full ACHR in any matters (such as WHO prizes) arising in the period before the next session.

OPENING OF THE SESSION (Agenda item 1)

1. The Chairman, Professor M. Gabr, opened the thirtieth session of the global Advisory Committee on Health Research (ACHR) and welcomed members to Geneva.

ELECTION OF OFFICERS (Agenda item 2)

2. Professor B. McA. Sayers and Professor G. Soberon Acevedo were elected Vice-Chairmen, and Professor A. M. Davies Rapporteur.

ADOPTION OF THE AGENDA AND PROGRAMME OF WORK (Agenda item 3)

3. The draft agenda (document ACHR30/90.1 Rev.1) and programme of work (document ACHR30/90.2 Rev.1) were adopted without amendment.

INTRODUCTORY STATEMENT BY THE DIRECTOR-GENERAL (Agenda item 4)

4. The Director-General expressed his deep appreciation and gratitude to the former Chairman of ACHR, Professor Osuntokun, who had untiringly contributed to ACHR and also participated in the scientific work of several programmes in WHO. He knew that he could count on his continuing support for the work of WHO for many years to come.

5. He then welcomed Professor Gabr, the new Chairman, who, in addition to his academic background in child health and nutrition, was bringing to ACHR his experience as Minister of Health of Egypt between 1978 and 1981. Retaining his active interest in the health sciences, he had been given recognition by the scientific community when he became President of the International Union of Nutritional Sciences.

6. The Director-General bid a special welcome to the new ACHR members: Professor Akinkugbe, Professor Davies, Professor Fliedner, Professor Hasan, Professor Neri, Dr Shimao and Professor Zeng Yi.

7. He also welcomed the Chairmen of the regional ACHRs, Professor Kaptué, Dr Fernando, Professor Jablensky, Professor Majali and Dr Tao Yixun. He was pleased to see WHO's temporary advisers equally participating, as well as the Director of the Regional Office for South-East Asia, Dr U Ko Ko, and the representatives of the research divisions in the WHO regional offices.

8. Referring to the last session of ACHR in 1988, he said he saw it as consolidating several years of work on matters of strategic importance, including the health research strategy, technology transfer and research on health manpower. The product of that work had helped him to shape the development of WHO's programme of work. For example, at global and interregional level, he had reallocated a portion of WHO's regular budget to areas which deserved greater emphasis. The idea was wholly consistent with the research strategy proposed by ACHR which stressed the importance of nutrition, the environment, health education and life-styles, as well as the need to control diseases, with due regard to their fundamental origins and not merely their mechanisms.

9. The problem was how to proceed along those lines in a coherent and structured way. There was a need to concentrate on priority issues and to promote work on subjects likely to have a critical influence in achieving the stated objectives. Scientific knowledge was obviously essential to assure predictability and success, and ACHR would have an important role to play in the global research orientation of WHO.

10. The recent Technical Discussions on health research at the Forty-third World Health Assembly constituted a landmark in so far as they sensitized health policy-makers to the importance of health research, but also to the importance of science and technology in general. A broad consensus had emerged on the need to strengthen national scientific and technological infrastructures, to support manpower and field-oriented research, and to focus on priority areas derived from the health research strategy. Renewed emphasis was

placed on the critical role of international scientific cooperation and information exchange in relation to WHO's health development work.

11. The result was resolution WHA43.19, adopted by the World Health Assembly, stressing a number of important points, among them the emerging problems of critical significance to world health, examples being AIDS, but also urbanization, migration and the changing age structure of populations. In addition to its frequent references to science and technology, the resolution also stressed the need for essential health research and for health systems research.

12. The Director-General concluded by stressing the desirability of improving the harmonization of ACHR, the foremost research advisory body of the Organization, and other scientific organs.

13. He wished ACHR members a fruitful discussion, assuring them that their advice would receive his closest attention.

14. Thanking the Director-General, the Chairman remarked that the target date for health for all was quickly approaching. This was the first session of ACHR since the Forty-third World Health Assembly had adopted the resolution on the role of health research indicating its vital importance in identifying and prioritizing national health problems and in improving the use of limited resources to solve such problems. At a time when WHO was moving from advocacy to more active measures, nothing was more sorely needed than greater emphasis on health research. It would be necessary to strengthen research capabilities, to foster the transfer of science and technology, to link basic and applied research, and to harmonize research efforts within WHO as well as with other national, international, governmental and nongovernmental organizations. ACHR, being the advisory body to the Director-General, bore a great responsibility in that respect. At a recent meeting the Director-General had mentioned three major areas in which he sought advice: first, health development research in global terms, which would support and enhance national research activities; secondly, identification of gaps in knowledge, to pinpoint further research studies; and thirdly, exploration of future developments in terms of the health problems they posed and of relevant scientific developments. In order to fulfil such a mandate, it would be necessary to set up a mechanism to provide for continuous monitoring by ACHR of progress in WHO-sponsored research.

15. The Chairman concluded by expressing confidence that useful and appropriate advice would result from the deliberations and contribute to the promotion of world health during the coming decade and beyond.

ACHR SYSTEM: GLOBAL AND REGIONAL ACTIVITIES (Agenda item 5)

REPORT BY THE PAST CHAIRMAN OF GLOBAL ACHR (Agenda item 5.1) (Annex 1)

16. Professor B. O. Osuntokun, who had chaired the twenty-ninth session of the global ACHR, held in October 1988, referred to the recommendations which it had made.

17. In respect of the report on health research strategy which had been widely disseminated, several Member States had adopted its principles as enunciated by the global ACHR at its twenty-ninth session, and the regional ACHRs were working on the more specific and detailed aspects of its implementation.

18. As regards nutrition, work had been undertaken to prepare a concept paper on global strategies for nutrition research. The subject had been one of the four major themes for the Technical Discussions at the Forty-third World Health Assembly. In the WHO Secretariat a food and nutrition programme had recently been created. Apart from its direct role in health-related nutrition activities, it would have to focus attention on institution-strengthening for nutrition research.

19. Health systems research had been identified as a priority issue and had been the subject of a working group at the Technical Discussions.

20. Concerning the transfer of technology, the recommendation to set up an independent group to monitor scientific and technological developments likely to be useful to WHO had been received favourably by the Director-General. An appropriate mechanism might emerge soon. A related event had been a Conference on "Health technology transfer: whose responsibility?" organized jointly with CIOMS on 2 and 3 November 1989. Its recommendations complemented those of the global ACHR's subcommittee on technology transfer, whose Chairman, Professor Gordon Ada, also chaired the Twenty-third CIOMS Conference.
21. The recommendation concerning health economics and related issues had given rise to the formation of a subcommittee on health and the economy, chaired by Professor B. McA. Sayers (see below).
22. As to health manpower research, the subject was considered as an integral component of the programme of human resources for health. An example was the current work on developing and testing a manual and on new methodology for the development of new approaches to education and training.
23. Another of the major themes for the Technical Discussions had been strengthening of research capability, an activity which was part and parcel of all special programmes. A recent development was the creation of a task force on strengthening WHO and national epidemiological capabilities. A joint consultation on research capability strengthening in least developed countries would take place from 10 to 12 December 1990 in Geneva to coordinate the approach of special programmes, namely those on tropical diseases research, human reproduction research, and AIDS.
24. Another recommendation of the twenty-ninth session of the global ACHR concerned research on accident injury and prevention. It had been felt that regional participation was needed, and as a result several regional ACHRs had discussed the subject, as had annual meetings of WHO collaborating centres. The Secretariat was also considering the possibility of convening an expert committee to consider the effectiveness of alcohol control, speed limits, and the wearing of helmets and seat belts.
25. On the question of research implications of quality assurance in health services, it appeared that some aspect of the work of several programmes dealt with the subject, for example those for radiation medicine and laboratory technology. It had also been on the agenda of the South East-Asia regional ACHR in April 1990.
26. Finally, a number of current and past members of the global ACHR had been fully involved in the preparation of the background documents for the Technical Discussions, and the current Chairman and four former chairmen had played key roles in conducting them.

Discussion

27. Professor Osuntokun's review was followed by a wide-ranging discussion on research priorities and on strategies for research promotion. Research capability-building and essential health research, together with "human-centred development" were seen as the major challenges for ACHR. These would require greater collaboration between countries, developed and developing equally, and the monitoring of scientific advances and their applicability to health research. The need for indigenous research and the capability to adapt scientific discoveries to local needs was again emphasized.
28. Moreover, technology transfer, to be successful and equitable, would need the development of methods to predict benefit/risk ratios for each situation before the expenditure of resources. Coordination of basic and applied research, particularly that done in institutions for medical and non-medical research, was seen to be essential.
29. Research manpower strategies were seen as a universal problem, in so far as they constrained the application of science to health needs. But in addition, there was a need for mechanisms which would ensure that recommendations of ACHR filtered down to

regional and country level; ACHR would have succeeded only when recommendations were implemented at the country level. The dissemination of information was particularly necessary to create awareness of the opportunities of science and the force of public pressure for its implementation.

Research into prevention of injury

30. It was reported to the session that a WHO consultation on research on epidemiology of injury in the elderly, convened in April 1990 in Annecy (France), had involved the WHO programme on health of the elderly and three collaborating centres for the WHO injury prevention programme. A consensus had been reached among members to advocate more consideration in programmes for the health of the elderly of safety aspects of aging and the urgent need for supporting such programmes in the strengthening of methodological aspects of related research.

31. Several consultations had taken place with the WHO programme on adolescent health in order to strengthen the component related to risk analysis in connection with violence and injury in this age group.

32. A methodological package for research on child injury had been jointly developed by headquarters and PAHO, tested during the last five years in five countries of the Region of the Americas, and it was now available for use in other regions.

33. The second and third meetings of heads of WHO collaborating centres on injury prevention had taken place in September 1989 and 1990, at which the ACHR report had been reviewed. Collaborating centres fully supported the guidance provided, but stressed also the need to give the right level of emphasis to protective measures that could be effective on a short-term scale and which required more systematic action and coordination between the health sector and other sectors involved.

34. Three WHO meetings were foreseen in 1991 and 1992 in which research on safety technology and health service organization for the care of the injured would be emphasized:

- a scientific group on brain trauma epidemiology and prevention;
- a study group on emergency trauma management;
- an expert committee on evaluation of road injury prevention programmes.

35. One fundamental role was that of improving and strengthening the health information base, particularly through involvement of emergency services in information gathering and in providing guidance for the design of protection measures against injury, in addition to their traditional therapeutic functions.

36. The strategy for research management and the establishment of appropriate infrastructure needed to be further developed and clarified in order to avoid overlapping between sectors and achieve optimal use of the limited resources generally available.

STATEMENTS BY THE CHAIRMEN OF THE REGIONAL ACHRs (Agenda item 5.2)

37. The sections summarizing the main points of the six statements are included in Annex 2. The highlights of the general discussion that followed are reported below.

38. It was clear from these reports that during the 10 years that the regional ACHRs have existed great progress had been made in the promotion and coordination of research. While the regional bodies must reflect the national priorities and their recommendations thus show great divergencies, there were many themes common to all, and many lessons for the global ACHR. There was a clear need to establish national research councils and to

improve national research capacities and collaboration with the regional research committees. The European and Western Pacific Regions were developing such general intercountry research councils. Closer relations between the activities of the ACHRs and other bodies coordinating scientific research were mandatory, and would require a close examination of the functions and activities of WHO collaborating institutions which were not being used effectively by WHO or by Member States.

39. A basic problem common to all regions and most countries is that of relations between "providers" and "consumers" of health research, between ministries of health and research establishments, often universities. There is an urgent need for the development of coordinating mechanisms to promote appreciation and use of science by health care providers as well as an understanding of health needs by research workers. The development of community-oriented medical schools was seen to be a step in the right direction.

40. It is important that in emphasizing health services research, basic training and research in biomedical and technological spheres should not be forgotten. Application of the concept of essential health research would guide priorities in national research and harmonize the relations between basic and applied science. Technology transfer and dissemination of information were seen to be priorities in every region. Establishment of centres of biotechnology and the forging of links between research workers and industry could provide regional resources necessary for strengthening indigenous research capability and the local production of pharmaceuticals and of diagnostic kits.

41. Rapid political change in many countries is leading to changes in the health environment and a need to upgrade global and regional research activities. The ACHRs must play a leadership role in this process and both global and regional activities must be accelerated. This will require the establishment of task forces and subcommittees on defined areas of research, annual meetings of the advisory committees, and mechanisms for ensuring continuity and updating of research information between meetings.

42. The global ACHR has a duty to synthesize a world view of health research and thus will require ever greater collaboration with the regions. So far such collaboration has been facilitated by the attendance of the Chairmen of the regional committees and regional officers responsible for research promotion and development at the meetings of the global ACHR and the attendance of the global ACHR Chairman at regional ACHR meetings. Additional measures should be sought to facilitate this process.

SUBCOMMITTEE ON HEALTH AND THE ECONOMY (Agenda item 5.3)

43. Introducing the interim report (Annex 3) the Chairman of the subcommittee, Professor B. McA. Sayers, drew attention to the terms of reference adopted by the subcommittee: briefly; to consider the need for further research on health economics and interactions between health and other sectors. In explaining the strategy of the plan of work mentioned in his interim report, he outlined some of the problems being faced.

44. First, research on interactions between sectors required the unravelling of "pathways" linking health and other sectors and the identification of the mechanisms by which they act. Socioeconomic systems were dynamic: causes led to effects that were often delayed, long-drawn out and non-proportional. As in other fields in such circumstances, unexpected instability might occur spontaneously or as a result of misguided interventions in the system. There were severe technical difficulties in judging, confirming and quantifying the dynamics of cause and effect in the overall context.

45. In the second place, variables affecting interactions between sectors were often difficult of access; sometimes values were missing or erroneous. Testing and correcting measurements depended on properties of the variable. Redundancy, statistical

"stationarity" and normal randomness as well as "non-stationarity" due to simple trends or seasonal variations could all be managed. However, at least some health and socioeconomic variables were best described, technically, as "chaotic". Interpretation of chaotic variables was difficult, and unless the character of the variable were recognized, misleading conclusions are possible.

46. Thirdly, the subcommittee recognized the importance of behavioural factors and patterns. Professor Gunatilleke had drawn attention to the important part played by education and cultural processes, leading to behavioural changes at the personal and household level, in the "health transition". The identification and interpretation of the key social variables and the manner in which they functioned in different contexts and development situations became vitally important for health policies and health strategies. However, much actual or potential knowledge about behaviour came in the form of semantic knowledge (e.g. descriptive statements) rather than numerical data. Such knowledge might nevertheless be valid, amenable to logical evaluation, and complete. How was it possible to collect, structure, integrate, draw inferences from, and validate such behavioural and other sociological knowledge? That was a generic problem to which the technology of logic programming and computational logic would contribute, forming and using a structured knowledge base which would structure sociological and behavioural knowledge and expertise, permit their interpretation, and allow generalizations to be made from them.

47. Fourthly, current indicators were not regarded as fully satisfactory. The task was to assemble a multidimensional entity that could be confirmed, verified and validated as measuring - usually indirectly - some attribute. Valid semantic knowledge could be used as a legitimate part of an indicator. But in that case, interpreting the meaning of complex changes would require reconsideration of the design and interpretation of indicators.

48. Finally, it would be necessary to validate any detailed picture of the inter- and intra-sectoral relations that could be identified by a systems analysis approach incorporating both qualitative and quantitative components, basically dependent upon computational logic and dynamic modelling of the econometric type.

49. In the face of these problems the subcommittee had identified the need for major research on methodological issues: on indicators, the properties of variables, qualitative information, knowledge bases, and the need for study of socio-behavioural factors interacting with health. Interim results should be widely applicable to WHO programmes.

50. The subcommittee had also recognized several important issues in the field of health economics the need for study of which was more immediately evident - and immediately applicable: macroeconomic policies (including structural adjustment) and health, stabilization policies and health, and research priorities in food and nutrition.

51. The target for the first phase of the subcommittee's work was a report that would identify major research topics that warrant immediate attention and could be tackled immediately, offering ACHR the benefit of informed expert comment on the necessary thoroughness and potential development of the research.

52. Amplifying the subcommittee Chairman's introduction, Professor Gunatilleke spoke further of the importance of social and behavioural influences on health. He pointed out that although the vital importance of the socioeconomic determinants of health has been widely recognized, knowledge of the way in which they operate and our capacity to influence and manage them have been quite limited. A much more thorough knowledge of the links between social changes and the shifts in disease patterns, and the profile of health risks, must be gained. The social sciences had a major role to play in this field.

53. There was a growing body of research in the social sciences related to health. The research efforts were of a very heterogeneous and diverse character and needed to be organized within a comprehensive framework if they were to make a critical impact on health strategies and management of health systems. They could be considered broadly in three categories - (1) research specific to programmes of disease control and health, in which behavioural changes and cost-effectiveness were a principal area of study; (2) research on the efficiency of resource use and allocation in health care systems and services in which health economics and management sciences would play a predominant role; and (3) research on the links between development and health which would involve a wide range of disciplines. The latter was perhaps the most important area for health strategies but one where methodology and the knowledge base was least developed. The ACHR subcommittee needed to examine how advances could be made in all these areas.

54. Professor Osuntokun reminded ACHR of the persuasive presentations made at its twenty-ninth session by Professor Thorbecke on health development and global economic trends (item 5.2.2(a) of its agenda), and Professor Attinger on health development models (item 5.2.2(b)), pointed out the difficulties created by variability in the impact of economic effects and restated the importance of modelling to provide insight into complex effects. Professor Fliedner outlined the critical consideration which had been given in the University of Ulm to devising better, functional indicators reflecting the quality of life, itself a more illuminating indicator of health than traditional ones, particularly from the viewpoint of the individual. Assessments that took account of impairments occurring at different stages of life, causing individuals to drop out of employment, or assessments that describe functional attributes allowing an individual to gain most from life, were regarded as promising. They showed that new developments in the design of indicators were indeed worth following up. It was generally agreed that new indicators were urgently needed; developments in the methodology for designing indicators, especially to take account of both quantitative and qualitative components, were seen as highly desirable. The existence of imponderable factors was recognized. Lack of continuity in health policy or the status of a minister of health could be significant factors in health policies.

55. The importance of decoding and quantifying the functions that underlie the evident links between health and other sectoral variables was recognized (for example, the link between longevity and the possession of two cars in a household - what underlay this observation?). The evident importance of socioeconomic factors to health was accepted. Any effective enhancement of research methodology and its application to studying socioeconomic determinants of health should be encouraged.

56. More generally, ACHR accepted the relevance and importance of the subcommittee's field of work; the plans for its continuing activities were endorsed.

FOLLOW-UP AND IMPLICATIONS FOR WHO'S PROGRAMME OF TECHNICAL DISCUSSIONS AND RESOLUTION WHA43.19 (Agenda item 6)

57. Professor Natth Bhamarapravati, Chairman of the Technical Discussions at the Forty-third World Health Assembly, reported that they had been attended by several hundred delegates. The first plenary of the discussions had been inaugurated by "keynote" speakers addressing four themes which had subsequently been discussed in four working groups on research capability strengthening, health systems research, nutrition, and recent advances in biological and physical sciences.

58. A formal report had been adopted at the closing plenary of the discussions and the General Chairman had subsequently delivered his report to the Health Assembly.

59. Although the Technical Discussions were not an integral part of the formal proceedings of the Assembly, the latter had been moved to pass resolution WHA43.19 (see Annex 4) which reflected its clear constitutional commitment to health research.

60. The preambular part of the resolution expressed important principles such as the need for national health policies to be based on "valid scientific evidence" and the recognition that such evidence required health research, implying the primacy of scientific knowledge over political expediency in matters of health policy. Reference to the application of existing knowledge was accompanied by a parallel statement about the need to generate new knowledge for problem-solving. Concerning the "mismatch" between the burden of illness in the Third World and the focus of investment in health research on problems in industrialized countries, key issues mentioned included the lack of scientific and institutional capacity to address local problems; disciplines such as epidemiology, health policy and social sciences, were highly relevant.

61. The operative paragraphs of the resolution addressed Member States, the donor agencies and related bodies, the research community and the Director-General. The ones addressed to Member States embodied the notion of essential health research covering a broad spectrum of activities ranging from elementary fact-finding and situation analysis to the fostering of innovation and experimentation and contribution to new knowledge. There was a place of choice here for policy research, systems research and the public health sciences.

62. Donor agencies were encouraged to increase their support for essential health research and capacity building, but also to support the policy-making bodies in research, science and technology. The research community was invited to participate both in essential health research and in research on global health problems. Stress was also placed on the need to strengthen the scientific approach to problems of health development.

63. The final operative paragraph, addressed to the Director-General, made several important points highly relevant to the work of ACHR:

- assessment of new and emerging areas in science and technology;
- investigation of evolving problems of critical significance to health;
- methodological development for trend assessment and forecasting;
- institutional arrangements to strengthen research capacity;
- further development of the WHO health research strategy.

64. There was also a reference to the issue of harmonization between WHO, the United Nations system and other agencies in matters of science and research policies. The Director-General was asked to explore the possibility of making specific provision within WHO's total resources to support research capability strengthening in Member States. He was also requested to report back to the Forty-fifth World Health Assembly in 1992.

65. The Technical Discussions on health research were welcomed by members of ACHR as an historic event and a challenge to evolve a research strategy which could answer the needs. Several themes ran through all the discussions and were emphasized by ACHR.

66. Most countries were still far from a national commitment to health research consistent with the requirements of their health policies. There was still a need to "market" health research, to create a demand on the part of decision-makers and a climate that would favour use of the results of research in policy formulation and practice.

67. Health development research¹ was needed by all nations, and there were common elements, although the strategies would differ in different regions and countries. The requirements included research into disease, patterns and the burden of disease and information systems which would facilitate forecasting of disease and evaluation of health interventions.

68. While each country needed a research capability or access to such capability at a regional level, it was necessary to maintain a balance between tactical and strategic research for health, between the development of new science and the utilization of existing methodology. For this, intercountry and interregional networks for scientific exchange and training were necessary and must be extended. In many countries, it was still necessary to bridge the gap between producers of research, usually the universities, and the "consumers", usually the ministries of health. One region was approaching this by helping ministries to establish their own health research units. A true partnership, leading to appropriate research for local health needs, would only be achieved through the participation of both parties in the formulation of research questions and, in the case of field research, the active involvement of health care professionals of all levels in its performance. These questions were related to the training of research workers and of health practitioners in research methods, their basic professional orientation being of crucial importance. Research workers need continuing motivation; it can come from success and satisfaction with their contribution, from an acceptable career structure and from status, professional advantages and international collaboration. Again, national commitment was essential.

69. Major emerging problems of society and the environment were already having an impact on the health of large population groups, and research into causes and ways of prevention was urgently needed. The demographic transition, the creation of "mega-cities", human migration and global pollution were outstanding examples.

70. The main considerations of the Technical Discussions and of the comments of ACHR were summarized by the Chairman under nine headings:

- (1) political commitment and the central importance of research to policy;
- (2) questions of research capability, training, career structures and national and regional facilities;
- (3) the balance of research, basic and applied, and the needs of health development research;
- (4) resources for, and support of, research, especially during economic adjustment;
- (5) harmonization of health research activities of universities, ministries, institutes and so on, and the role of collaborating centres;
- (6) links between health research and other research activities applicable to health, especially social and behavioural research;
- (7) research on evolving problems such as demographic and environmental changes, genetic engineering, technology transfer;

¹ The term "health development" is used to indicate a positive change in health status, where health benefits are maximized and health hazards are minimized. Health development research is both strategic and tactical in nature. It investigates health in the societal and evolutionary context, and draws on several disciplines in the biomedical, socio-behavioural as well as in the engineering sciences. Health development research comprises the whole range of research activities necessary to define health problems and to design and evaluate plans and policies to promote health and alleviate disease. Its scope includes the concepts and contents of essential health research.

(8) collaboration between countries and regions, "South-South" as well as "North-South";

(9) quality assurance for research, evaluation criteria, ethical questions.

71. The consideration on the Technical Discussions naturally led to detailed deliberations on the future work of ACHR (See Agenda item 9, paragraphs 92-104 below).

MECHANISMS FOR THE ACQUISITION OF SCIENTIFIC AND TECHNOLOGICAL ADVICE IN WHO (Agenda item 7) (document ACHR30/90.6)

72. Professor Osuntokun reviewed the development of science advice within WHO. Thirty years ago ACHR (then the Advisory Committee on Medical Research) had been created by resolution of the World Health Assembly. Each of the special programmes of research had been proposed by ACHR (with the sole exception of the general programme on AIDS) and each had its own mechanisms for the exchange of scientific information and the monitoring of its activities. Other mechanisms include 52 expert advisory panels and committees, study groups, ad hoc meetings and consultations. There were now a thousand collaborating centres as well as hundreds of nongovernment organizations and other bodies supplying scientific informations. CIOMS was a particularly valued collaborator, particularly in question of ethics.

73. The last review of the workings of those sources of scientific information had been made in 1978.

74. The Chairman of the global ACHR attended the scientific and technical advisory committees of some of the special programmes, but the chairmen of those committees were not members of ACHR.

75. The time had come to review the mechanisms. The arrangements of three of the WHO special programmes for scientific exchange and monitoring were described to ACHR. The Special Programme for Research and Training in Tropical Diseases (TDR) was organized around six disease-specific units which utilized basic and applied sciences as necessary for the control strategy. Each had a steering committee in which scientists played the leading role in determining research priorities and strategy. Appointments were for three years with only one renewal. Scientific monitoring and coordination for the total Programme was provided by the Scientific and Technical Advisory Committee (STAC), responsible for the overall policy.

76. The oldest special programme in WHO,¹ now 17 years old, was the Special Programme of Research, Development and Research Training in Human Reproduction (HRP) and this, too, was run by scientists, not the secretariat. There were eight steering committees dealing with different aspects of fertility and reproduction, appointments being for a maximum of six years. Scientific direction is completed by three regional subcommittees of the Scientific and Technical Advisory Group (STAG), with committees on resources, toxicology and laboratory methods, and a scientific and ethical review group. STAG oversaw the whole scientific basis of the programme. Specific project proposals were reviewed in the country in question before consideration by the steering committees and then the scientific and ethical review committee.

77. The Global Programme on AIDS had as its main purpose the support of national AIDS prevention and control programmes, with "targeted" research accounting for 13% of the budget and operational research, 12%. Half of the budget went to country programmes. The staff had increased from 10 to 150 in three years, and there was a new structural organization, so that the role of the advisory bodies was still in flux. The Global Commission on AIDS advised the Director-General and the Director of GPA's office of

¹ Although the International Agency for Research on Cancer, in Lyon, was also conceived by the then Advisory Committee on Medical Research several years earlier.

research, which had five units and four steering committees. These had 10 members who met biannually. The function of the steering committees was like that of those for other programmes, while the Global Commission had representatives of TDR, HRP and ACHR. There were 40 collaborating centres, but it was not yet clear how they are to be used.

78. In the discussion on the item, members of ACHR agreed that there was a need for coordination and communication between WHO's various scientific activities. The needs of WHO programmes for scientific input must be defined and optimal strategies for the transfer of science and technology between programmes and to countries determined. The role of ACHR should be one of general supervision, linking needs with available resources and coordinating training and research capability strengthening to avoid duplication so as to achieve optimal use of existing resources within and outside WHO for its needs. This role should not interfere with the current management of the special programmes but rather ensure the harmonization of the total WHO research effort. ACHR should look to the future, determining where science was going and what new initiatives were emerging within WHO, so as to use existing structures most effectively and develop collaborative activities in and outside the Organization. Among the problems common to all research programmes were the balancing of biases in priority-setting by governments and by scientists, and the changing of the direction of research as health problems required. For ACHR, where budgetary constraints limit the frequency of sessions and where members might only be able to attend one or two of them, there was the further problem of continuity.

79. ACHR agreed to set up a working group to explore the issues raised in the discussion and in the background paper, and to advise on the harmonization of the mechanisms for the acquisition and transfer of scientific and technological advice within and outside WHO. The working group would consist of the Chairman of ACHR, Professor M. Gabr and the two former chairmen, Professor B. O. Osuntokun and Professor V. Ramalingaswami; they would have the power to coopt other members as necessary.

COMMUNICATION ON CURRENT ACTIVITIES OF THE COUNCIL FOR INTERNATIONAL ORGANIZATIONS OF MEDICAL SCIENCES (CIOMS) (Agenda item 8)

80. In the absence of Dr Bankowski, Secretary-General of CIOMS, the activities of CIOMS were presented by Professor H. Danielsson and Professor B. O. Osuntokun. The presentations focused on two CIOMS conferences, on "Health technology transfer: whose responsibility?" and on "Genetics, ethics and human values: human genome mapping, genetic screening and gene therapy". Before reporting on those two conferences, mention was made of some other activities of CIOMS.

Drug safety

81. The work on international reporting of adverse drug reactions had been completed and the final report had been published in 1990.

82. Work had commenced on definitions of adverse drug reactions, and a paper on drug induced liver disorders had just been published.¹

Health technology transfer: whose responsibility?

83. The proceedings of the conference on health technology transfer, held in Geneva on 2 and 3 November 1989 and organized jointly with WHO, had just been published by CIOMS. The conference paid particular attention to the need for efficient transfer of technology from developed to developing countries, and emphasized the pivotal role of WHO in that process. Since the publication was available, there was no detailed reporting of the contents and results of the conference.

¹ International Journal of Clinical Pharmacology, Therapy and Toxicology, 28, 317-322 (1990).

Genetics, ethics and human values: human genome mapping, genetic screening and gene therapy

84. A conference on this topic had been held in Toyko and Inuyama City, Japan from 22 to 27 July 1990. Since no documentation was available to the members of ACHR, a more extensive oral report was given. Initially, a summary had been made of current activities on mapping and sequencing the human genome. The main activities were those of the National Institutes of Health and the Department of Energy of the United States of America. The United States Congress had provided special funds for the project and these were rapidly growing. It was estimated that about US\$ 150 million would be available in the fiscal year 1991. Mention had also been made of the fact that the Commission of European Communities had decided in June 1990 to launch a project on human genome analysis. For the period 1 July 1990 - 31 December 1991, 15 million ECU (US\$ 20 million) would be available. Further, several countries, including Japan and the United Kingdom, had initiated national efforts on mapping and sequencing the human genome. Even if there had been debate, particularly in the United States of America, on the channelling of so much resources to the project, the prevailing opinion was that the project would provide invaluable knowledge not only on the single-gene diseases but also on many common diseases such as cancer and cardiovascular diseases.

85. The CIOMS conference on human genome mapping, genetic screening and gene therapy had been one in a series entitled "Health policy, ethics and human values". As with previous conferences, there had been broad representation not only of scientists but also of theologians, philosophers and parliamentarians. Three working groups with the same broad representation had been formed on: human genome mapping and sequencing, genetic screening, and gene therapy. All three working groups had reached consensus on their reports, and a general statement on recommendations by the conference, the Declaration of Inuyama, had been accepted unanimously (Annex 5).

86. With respect to the project on mapping and sequencing the human genome, the conference had emphasized the need for long-term support. The project was considered very important for the provision of better means of diagnosis, prevention and treatment of disease. Strong recommendations had been made to involve developing countries in the project as soon as possible; further, efforts should be made to inform the public about the project and to stimulate public discussion of the project.

87. Concerning genetic screening, the conference had agreed that this should be made available broadly. Total confidentiality should be observed and genetic screening should be voluntary. In view of the expected increase in possibilities for genetic screening, the need for equitable and efficient services had been underlined. The necessity of informing the public, perhaps particularly in the developing countries, and of stimulating public debate, had been emphasized as being not least important in the case of genetic screening.

88. In the case of somatic cell gene therapy, there had been complete agreement that no new ethical problems were involved. It was to be expected that for several years to come, gene therapy would be carried out primarily at the research level. The conference did not rule out the possibility of germ-line gene therapy; however, such therapy was not likely to be technically feasible in the coming decade.

International ethical guidelines for epidemiological research and practice

89. It was reported that CIOMS acted as the ethical watchdog of ACHR and had held a series of joint conferences with WHO on emerging ethical problems. Guidelines on ethical issues of human research, already published, were universally accepted as the required standards. In collaboration with the International Epidemiological Association a conference on ethical guidelines for epidemiological research had been planned for November 1990.

Discussion by ACHR

90. Great support for CIOMS activities was expressed, particularly those concerning ethics, human values and health policy. It was pointed out that mapping and particularly sequencing of the human genome was extremely costly and was thus currently the prerogative of rich countries. But scientists from developing countries must be encouraged to participate actively in human genome organization because of the frequency of genetic diseases in some of them, but particularly because of the technological spin-off. The methodology being developed would be applicable to other aspects of disease control as well as of importance for the development of diagnostic methods.

91. For some developing countries there may be a conflict between behavioural, cultural and religious beliefs and what might be perceived as the "unnatural selection" of genetic engineering; CIOMS should be asked to explore the relation between different cultural patterns and acceptance of modern genetic research and its potential application.

FUTURE ACHR INITIATIVES (Agenda item 9)

92. Review of the topics arising out of the Technical Discussions (see agenda item 6, paragraphs 57-71 above) and an extended discussion on possible responses to resolution WHA43.19 led naturally to a consideration of appropriate initiatives for ACHR. The research topics mentioned in the resolution and in the course of discussion could conveniently be grouped under four main headings, with some measure of unavoidable but maybe desirable overlapping: health development research; evolving problems of critical significance to health; science and technology for health; research capability strengthening. The agreed set of topics under each heading, listed below, would need further refinement and determination of priorities, targets and outcomes to be expected within the short and long term. Each should be the responsibility of a task force or subcommittee. The future development of related initiatives would be the responsibility of the global and regional ACHRs as a single system.

Health development research

93. This field comprised the identification and analysis of priority health problems, the use of limited resources, the improvement of health policy and management, the promotion of innovation and experimentation, and the acquisition of new knowledge for local and general benefit.

94. Major topics were:

- measurement of health problems
- health information systems
- health policy
- health systems and their research methodology
- health economics
- development of health
 - political will and commitment
 - equity
 - social and economic aspects and constraints
- health research by all the "family" of health professionals
- advocacy and marketing

- health behaviour
- development of local health research strategies
- balancing of different kinds of research.

Evolving problems of critical significance to health

95. Major topics included:

- demographic transitions (including aging) and their consequences
- migration
- urbanization
- employment
- environment
- educational and economic status
- socio-political change and political stability
- interaction between development and health
- behavioural changes
- new and evolving diseases and vectors
- nutritional problems.

Science and technology for health

96. Major topics were:

- monitoring emerging science and technology for potential relevance to health
- matching existing technology with existing health needs
- management of information technology
- transfer of technology; conditions for optimizing receipt and utilization
- development of methodology:
 - for design of indicators
 - for knowledge bases
 - for adapting technology to national needs
 - for decision-support technology
- ethical problems arising from the use of technology.

Research capability strengthening

97. This comprised endogenous capability-building for health research.

98. Major topics included:

- the role of institutions, universities and networks within and between countries, regions and within WHO
- collaborative links (including those within the United Nations system) and the involvement of collaborating centres, nongovernmental organizations and donor agencies
- manpower
 - needs
 - training
 - motivation
 - career structures
- balancing of different kinds of research
 - essential, basic (strategic), applied (tactical)
- creation of environments that will foster scholarship and creativity
- multidisciplinary and multisectoral research links
- evaluation and criteria; quality assurance.

99. ACHR agreed to establish three task forces - and appoint a coordinator for each - together with a subcommittee (having potentially somewhat different terms of reference from those of the task forces) on research capability strengthening. The groups are expected to select priority topics for discussions, and arrangements will be made by the Secretariat to facilitate close collaboration. Members of ACHR were asked to indicate their preference for membership.

100. Each task force and the subcommittee are asked to present an operational plan within 12 months.

101. The following appointments were made:

| <u>Task Force</u> | <u>Coordinator</u> |
|-----------------------------------|--------------------------|
| Health development research | Professor A. M. Davies |
| Evolving problems | Professor T. M. Fliedner |
| Science and technology | Professor B. McA. Sayers |
| <u>Subcommittee</u> | <u>Chairman</u> |
| Research capability strengthening | Professor M. Gabr |

102. ACHR perceived the need for a standing committee to maintain the continuity of its work. The standing committee would need the delegated authority to transmit to the Director-General a progress report on the work being initiated by ACHR. Indeed, operative paragraph 5(7) of resolution WHA43.19, required that progress on implementation of the resolution should be reported through the Executive Board to the Forty-fifth World Health Assembly and thus before the next session of the ACHR in 1992. A standing

committee comprising the Chairman, Vice-Chairmen, the immediate past Chairman, the Rapporteur and Secretariat members, with delegated authority, was appointed; it would keep all members of ACHR fully informed, and report on its activities to the next session.

103. It was regarded as crucial that the Office of Research Promotion and Development should be given the full responsibility for coordination and secretariat functions for all three task forces and the proposed new subcommittee. Nevertheless, in view of the time-scale for the necessary activities, coordinators of the task forces and the Chairman of the subcommittee should be free informally to advance the work of their group in consultation with the Office as they saw fit. Indeed it was hoped that they would employ their best endeavours to yield positive results from their work in time for reporting by October 1991.

104. Resolution WHA43.19 requested the Director-General to ensure wide distribution of the report of the Technical Discussions. Endorsing this request, ACHR determined that it could best be met if, in addition to the normal dissemination of documents by WHO to ministries of health, there could be direct contact with appropriate universities, research centres and nongovernmental organizations to ensure the broadest information on research needs for health.

OTHER BUSINESS (Agenda item 10)

105. The standing committee of ACHR was authorized to act on behalf of the full ACHR in any matters (such as WHO prizes) arising in the period before the next session; again, members would be kept informed through the Secretariat.

REVIEW AND ADOPTION OF THE REPORT (Agenda item 11)

106. ACHR reviewed and adopted the report of its thirtieth session, subject to its finalization by the Chairman, Rapporteur and Secretary.

CLOSURE OF THE SESSION (Agenda item 12)

107. The Deputy Director-General, in bringing the meeting to a close, welcomed the transition of ACHR from a forum of a purely technical nature to one which considered substantive policy needs and their research implications. The Committee had come to grips with real-life problems and had a special role within and outside WHO in furthering research for health development. He welcomed the presence of Professor Evans as a temporary adviser and recalled that WHO's mandate was obviously in favour of strengthening national research capabilities and of essential health research activities.

108. He was pleased with the formation of a standing committee to maintain continuity and contact with the Organization, and assured ACHR that the recommendations contained in the report would receive his full attention as well as that of the Director-General. He looked forward to collaborating on the follow-up activities based on the recommendations of the "Independent Commission".

ACHR SYSTEM: GLOBAL AND REGIONAL ACTIVITIES

Report by the past Chairman of the global ACHR

IMPLEMENTATION OF RECOMMENDATIONS OF THE TWENTY-NINTH SESSION OF THE GLOBAL ACHR

1. The twenty-ninth session of the global Advisory Committee on Health Research, held in October 1988, made a number of recommendations.

Health research strategy

2. Many Member States, particularly in the South-East Asia and Western Pacific Regions, have adopted the principles of the health research strategy as finally enunciated by the global ACHR at its twenty-ninth session. It would appear that the message of the health research strategy has been widely disseminated and accepted, although no up-to-date version of the 1986 document has been published.

Need for increased research on nutrition

3. It is universally accepted that nutrition stands out as a crucial and decisive determinant of health although this concept has to be understood in the light of broad socioeconomic factors. In implementation of the recommendation of the twenty-ninth session of the global ACHR on nutrition, two eminent experts collaborating with the Nutrition unit of WHO's Division of Family Health were commissioned to prepare a concept paper on a global strategy for nutrition research. Nutrition was one of four major themes for the Technical Discussions at the Forty-third World Health Assembly in May 1990.

4. The nutrition research panel of the Technical Discussions held during the Forty-third World Health Assembly not only permitted discussions on research from a thematic point of view, but also provided the opportunity to re-examine some basic principles which guide the work of international agencies. It was concluded that whilst the global conceptual framework is regularly updated, its operational use dates back 40 years.

5. In nutrition, two key issues have become apparent. First, nutrition is in transition: the very nature of the nutrition problem is in a state of flux in many countries. The primacy and relative importance of the traditional determinants of malnutrition, even though still serious, are beginning to be rivalled by a steadily growing incidence of diet-related diseases due to a combination of excessive or unbalanced food intake and unhealthy life-styles. Meanwhile, malnutrition's main underlying social and economic factors, whether in developing or developed countries, remain essentially unchanged: poverty and marginalization.

6. Therefore, nutrition and its research component should be given a major role. Consensus exists on the importance of the association of food and nutrition with health.

7. As far as WHO is concerned and in response to future needs, a food and nutrition programme was recently created. This programme, apart from its direct role in health-related nutrition activities, will have to focus attention on the attainment of the objectives of the second crucial issue, identified as institution-strengthening or -building for nutrition research.

8. One way to cope with that problem is the establishment of networks of collaborating centres. In the European Region, and in the Americas to a lesser degree, centres have been designated whose complementary characteristics cover many aspects of nutrition research, including mass catering, energy requirements and consumption. Moreover, interaction between centres is facilitated, and association and pairing will also be part of North/South cooperation on an equal basis.

9. The initiative taken by the Director-General of WHO to convene an international conference on nutrition, jointly organized with FAO, will encourage researchers throughout the world to contribute. An advisory committee will be established to select thematic papers and review them prior to December 1992, at which time the conference is scheduled to commence in Italy.

Health systems research

10. The health research strategy approved by the twenty-ninth session of the global ACHR recommended that health systems research should continue to receive top priority. It has been the focus of extensive discussion in the global ACHR since the 1970s (a subcommittee, chaired by Professor John Evans, was set up in 1978). Health systems research was another of the four major themes for the Technical Discussions at the Forty-third World Health Assembly in May 1990. I quote below the comments of the Programme Committee in a report to the eighty-seventh session of the Executive Board, which represents the most recent policy statement of the World Health Organization on health systems research.

"The Committee emphasized the relevance and importance to all of WHO's programmes of scientifically sound, goal-oriented health, biomedical and health systems research. It was noted that research activities were distributed throughout practically all of the programmes in the WHO programme budget. Certain programmes, such as those related to tropical diseases and human reproduction, were aimed at research results and products that would be tested, adapted and eventually applied on a large scale in countries. These programmes also stressed institution strengthening and research capacity building in developing countries. Budgetary provision for research was also made under the programmes of research promotion and development and health systems research and development and potentially in the Director-General's Development Programme. Care had to be taken to ensure complementarity and avoid duplication of efforts and resources. It was desirable to remove the mystery from health systems research, which was a discipline in its own right, but which was also a day-to-day operation at all levels of the health system to ensure efficient and effective performance. Quality assurance was a rapidly emerging issue in primary health care, requiring research and managerial attention. Much of what WHO was doing in support of countries in the field of primary health care was, in fact, applied health systems research."

Transfer of technology

11. The reaction of the Director-General to the recommendation on establishment of an independent group to monitor scientific and technological developments likely to be useful to WHO was favourable. The group was to report to the Director-General and ACHR. However, the Director-General felt that the principle of a meeting of high-level experts on science and technology should be institutionalized rather than be a "structure" (i.e. group, committee, etc.). For example, there could be an annual or biennial seminar (between ACHR sessions) on science and technology for health development. More recently it has been suggested that the same purpose can be partially served by task forces on (1) assessment of new and emerging areas in science and technology, (2) investigation of

evolving problems of critical significance to global health and (3) health development research. Such task forces would complete defined tasks by correspondence, teleconferences, commissioned studies, meetings or any other means. This would permit more flexibility than formal subcommittees or working groups functioning mainly in meetings.

CIOMS Conference on "Health Technology Transfer: Whose Responsibility?" (2 and 3 November 1989)

12. The Council for International Organizations of Medical Sciences (CIOMS), jointly with WHO (represented mainly by staff of the Office of Research Promotion and Development and the Division of Diagnostic, Therapeutic and Rehabilitative Technology), organized and convened the twenty-third CIOMS Round Table Conference, on "Health Technology Transfer: Whose Responsibility?", on 2 and 3 November 1989, in Geneva. The recommendations of the Conference complement those of the global ACHR's Subcommittee on Technology Transfer, whose Chairman, Professor Gordon Ada, also chaired the XXIII CIOMS Conference. These recommendations which would be summarized as shown below, would be further expanded upon when item 8 on the Agenda is discussed.

"The Conference participants supported a suggestion that, in view of the rapid advances in health technology and the risks associated with its unregulated or indiscriminate transfer to developing countries, WHO, in association with other international organizations concerned with health development in developing countries, should expand and intensify its already influential role in guiding and advising on its transfer. One possible means of doing so would be the establishment under WHO auspices of a task force which would be responsible for, inter alia, collating, assessing and disseminating knowledge and information gained from experience in Member States in technology transfer. Such a body could have a number of functions, such as the study of trends and developments in the transfer of all forms of health technology; the correlating and coordination of WHO's activities in technology transfer; cooperation with other concerned international organizations; the sponsorship of promotion of research into the determinants of success and failure in technology transfer, and into methods of evaluating technology; advising on sources of supply of technology, on its effectiveness and cost-efficiency, and on aspects of installation and maintenance; and assisting in assessing needs and priorities in technology transfer in the special circumstances of different countries. The Conference also supported a suggestion that WHO might stimulate or sponsor the establishment of a foundation which would promote and support health technology transfer.

In its concluding session, the Conference emphasized WHO's pivotal and unique role in increasing the effectiveness of health technology transfer, by accepting challenges, offering unbiased opinions, and acting as a repository and facilitator of information transfer."

Subcommittee on health economics

13. The Director-General approved the recommendation of the twenty-ninth session of the global ACHR to set up a subcommittee on health economics. Professor B. McA. Sayers, the Chairman of the subcommittee, will present to the thirtieth session of the global ACHR an interim report of the activities of the subcommittee which is expected to conclude its work within the next 12 months.

Health manpower research

14. The recommendations of the twenty-ninth session of the global ACHR are being implemented in the sense that research in health manpower development is regarded as an

integral component of the WHO Division of Development of Human Resources for Health (HRH). The present policy of the organization is that the HRH programme from the 1992-1993 biennium will no longer show a separate component for human resource research. This is because many of the activities within the programme have a research component or use a research strategy, for example, the developing and testing of a manual or new methodology or the development of new approaches to education and training. This being so, separating the research activities would be difficult and certainly artificial.

15. Strengthening of research capability, especially in developing countries, was another of the four major themes for the Technical Discussions at the Forty-third World Health Assembly.

16. All the special programmes have activities for research capability strengthening.

17. A task force has been set up on strengthening of WHO and national epidemiological capabilities, chaired by Dr J.-P. Jardel, Assistant Director-General.

18. The WHO Global Programme on AIDS, the Special Programme of Research, Development and Research Training in Human Reproduction, and the Special Programme for Research and Training in Tropical Diseases are jointly sponsoring a consultation from 10 to 12 December 1990, at WHO Geneva on approaches to research capability strengthening in the least developed countries (LDCs) and the role that the special programmes can play in this connection. An expert has already been contracted to review the special programmes experience with research capability strengthening in the lesser developed countries and to make recommendations for supporting it in LDCs.

Research on accident injury and prevention

19. Commenting on the recommendation of the twenty-ninth session of the global ACHR that more research work including regional participation was needed and that a working group be convened to plan a research programme, the Director-General was of the view that exhaustive presentation at the twenty-ninth session of the global ACHR by Professor Badran and the discussions at the twenty-eighth and twenty-ninth sessions constituted formidable guidance for the time being. The subject was subsequently discussed at the South-East Asia and Western Pacific regional ACHR sessions.

20. Research in accident injury and prevention is to focus on: (1) Behavioural aspects of determinants of accidents and injury, targeted towards primary prevention, especially in high-risk groups, i.e., among children, adolescents and the elderly; (2) management of injuries within the health sector, including intensive care mechanisms for response to accidents and rehabilitation of those with brain injuries.

21. Since resources are limited, it is important not to duplicate research efforts in other sectors, e.g., transport and the prevention of road accidents, the effectiveness of wearing of seat-belts and helmets, decreasing horse-power of motor vehicles, regulation of speed of automobiles, control of "drinking and driving", etc.

22. A research advisory group on accidents in the elderly met in April 1990.

23. WHO is promoting annual meetings of representatives of the 10 collaborating centres on accident prevention and epidemiology of brain injuries. One objective is to mount effective national campaigns on the desirability of wearing crash-helmets.

24. There is a recognized need to convene a WHO expert committee to review the evidence of the effectiveness of alcohol control, speed limitation and wearing of helmets and seat-belts. The objectives are the usual ones: to reach a scientific consensus on

matters where international and national applicability is useful and desirable, and to make recommendations which will be useful in building up WHO's technical and research policies.

Research implications of quality assurance of health services

25. There was an informal consultation of leading medical practitioners on the Director-General's initiative on quality assurance in August 1990. Quality assurance of health care delivery was fully discussed at the South-East Asia regional ACHR in April 1990.

26. Research on quality assurance is an important component of many of the WHO programmes - in primary health care, laboratory technology, radiation medicine, etc.

27. In radiation medicine, a series of scientific groups and study groups met during the past eight years, the results being published in the WHO Technical Report Series. Regarding future activities in the area of diagnostic X-rays, WHO is now planning the production of a set of standard or model radiographs of the most common examinations. This will involve participation of leading experts and institutions throughout the world to assist WHO in determining the standard.

28. The results will be made available in the form of full-size duplicate radiographs to enable radiology departments throughout the world to obtain a standard set for comparison, and the impact is expected to be a general improvement of radiographic quality. Regarding mammography and ultrasound, technical discussions with research groups will be conducted in November 1990 to explore the feasibility of developing "total performance" phantoms for use in mammography and ultrasound, similar to the concept which has been used in nuclear medicine.

29. In radiotherapy, activities that are just now beginning in collaboration with IAEA and which have an applied research component are: (1) a coordinated research programme on computer-assisted radiotherapy planning for cancer of the cervix; and (2) a coordinated research programme on computer-assisted radiotherapy planning for cancer of the head and neck. The emphasis will be on methods using personal computers and suitable software to improve the accuracy and quality of treatment planning and dosimetry.

30. Additional future activities in radiotherapy quality assurance include studies with a "human-shaped phantom" to determine the accuracy with which the radiation is actually delivered to the target organ. These studies in collaboration with IAEA will be conducted first in leading institutions in the United States of America and in Europe; after the method has been tested and any necessary adjustments made, the studies will be extended to developing countries through the IAEA/WHO network of secondary standard dosimetry laboratories and WHO collaborating centres.

TECHNICAL DISCUSSIONS AT THE FORTY-THIRD WORLD HEALTH ASSEMBLY

31. The subgroup recommended by the twenty-third session of the global ACHR, and a number of past members of the global ACHR, were fully involved in the preparation of the background documents for the Technical Discussions. The current Chairman of ACHR, four former Chairmen and three former members played key roles in the conduct of the Technical Discussions - as Chairman of the Technical Discussions (Professor Natth Bhamarapravati), as "keynote" speakers in the plenary session (Professor N. S. Scrimshaw, Professor R. Bergström, Professor V. Ramalingaswami and Professor W. Hassouna), and as conveners of the group discussions (Professor M. Gabr, Professor B. O. Osuntokun, Professor J. Evans and Professor J. Lederberg).

RESEARCH ON EPIDEMIOLOGY AND CONTROL OF DIABETES MELLITUS

32. The twenty-ninth session of the global ACHR requested that the subject should be included in the agenda of the thirtieth session. It has not been possible to do this for a number of reasons, including the reorganization of the division of which the Diabetes unit is part and the possibility that global diabetes research problems will be considered among the "evolving problems of critical significance to world health" to be investigated in accordance with operative paragraph 5(2) of resolution WHA43.19.

COORDINATION OF THE ACTIVITIES OF THE GLOBAL AND REGIONAL ACHRS

33. Coordination continued in the usual way. The Chairman of the global ACHR and staff of the WHO Office of Research Promotion and Development attended all the sessions of the regional ACHRs held since the twenty-ninth session of the global ACHR, except that the Chairman of the global ACHR did not attend the February 1990 session of the European regional ACHR. The Chairman of the global ACHR and staff of the Office also attended the meeting of directors of medical research councils and analogous bodies in the South-East Asia Region.

EPILOGUE

34. I end by referring to the "Good Book", where the preacher wrote that without vision, all would perish. Vision, of course, can only come through research. With research providing vision, all shall live.

35. Finally, it has been an honour, a privilege and a pleasure to have served the ACHR system as a member perhaps longer than anyone else since it was established in 1959. The late Lord Rosenheim, Chairman of ACMR from 1967 to 1972, was one of my mentors. I worked with all the Chairmen who followed - Professor Scrimshaw, Professor Bergström and Professor Ramalingaswami. In my view the ACHR system has done well in fulfilling the role assigned to it by the World Health Assembly. My plea is that, since it is purely advisory in function, the mechanism for implementing its advisory functions should be strengthened.

STATEMENTS BY THE CHAIRMEN OF THE REGIONAL ACHRS

1. The following sections summarize the main highlights of the six statements.

African Region

2. The report was introduced by Professor L. Kaptué, Chairman of the African regional ACHR.

Introduction and description of the Regional Office's research "thrust"

3. It was reported that health research had taken a prominent role in the Regional Office's programme of technical collaboration with the intensification of efforts to implement the African health development "Scenario" as the overall framework for accelerating achievement of the goal of health for all. The scenario described research as a means for finding alternative solutions to the operational and health-system-related problems arising from the implementation of primary health care. It was an integral component of the health development cycle, which together with management improvement and training formed a "triad" in the process of strengthening the functioning of the three levels of the health system. As part of the acceleration of the process, the Regional Committee for Africa had decided on health research as the topic of its technical discussions in 1992.

4. This document describes the thrust and the three-year plan of action of the African Region in health research as part of its five-year development plan and within the context of the "scenario". While research traditionally goes hand in hand with development, the Regional Office for Africa would emphasize the promotion and documentation of health research at the regional level and strengthen its collaboration with, and support to, the global special programmes on research, development and research training. This is in recognition of the tremendous efforts by these global programmes in research and development, including their successful initiatives for national and institutional capacity-building. Such activities should also maximize the utilization of the limited resources available for health research.

5. Health research promotion in the Region focuses on the integration of a research component into each health programme and supports it with small grants for research activities, particularly those aimed at improving the management and delivery of health services. The documentation of research activities focuses on the dissemination and utilization of research results, including the compilation of existing data on health research and related institutions and experts. The Regional Office wishes to strengthen its collaboration with and support to efforts by the special programmes on human reproduction research (HRP) and tropical disease research (TDR) and the programme for health systems research, aimed at national capacity building in health research.

Health research activities of the Region 1988 to 1990

6. A review of health research including resources in the Region was conducted in March 1990. The most important factor facilitating the strengthening of health research in the Region is the central role that the "scenario" has given to it in health development and as a management tool for the improvement of the health system. This central role was reaffirmed in the Technical Discussions at the Forty-third World Health Assembly.

7. Another strength is the valuable experience, expertise and learning materials derived from four years of implementation of the Joint WHO/DGIS/RT/HSR project in subregion III.

8. The constraints on the promotion and documentation of health research in the Region were identified as they relate to the Organization as a whole, health managers and health workers, the research community and donors. Allocation for research promotion and development and health systems research in the regional budget at country level (as determined by Member States) is 1% of the total regular budget for the Region. The sum of US\$ 100 000 has been made available from the Regional Director's component of the Director-General's and Regional Directors' Development Programme to serve as seed money for awarding small research grants and prizes.

9. In line with the approach of integrating management improvement with training and research, in 1986, the regional ACHR became part of the larger committee, the African Advisory Committee for Health Development (AACHD), a session of which was held in June 1990 with health research as one of the main themes. It focused on the research framework for monitoring progress made towards achieving health for all, using 27 community health indicators that had been accepted in the Region. AACHD identified the types of research required to make them more practical and to validate certain findings.

10. AACHD underlined the importance of research and recommended the appointment of focal points for health research in ministries of health, the creation of national advisory committees for health research, and the progressive allocation of at least 5% of the health sector budget for research.

11. A number of health programmes have a research component with extrabudgetary funds mobilized by headquarters, e.g., the Global Programme on AIDS, the maternal and child health programme, the Expanded Programme on Immunization and the diarrhoeal diseases control programme. The training of nationals in research as a component of national capacity-building has yet to be introduced as an integral part of most of these programmes.

12. Regional initiatives included mobilization and management of extrabudgetary funding by the Nutrition unit and the research promotion and development unit at the Regional Office, for workshops and development and implementation of health research. Other activities related to preparation of project proposals and listing of research institutions.

13. Participation by countries in the special programmes (HRP, TDR) and the health systems research programme continued. In view of the success of the Joint WHO/DGIS/RTI project on health systems research, facilitated by headquarters and implemented in subregion III, plans are under way to extend it to subregions I and II.

14. Ten new WHO collaborating centres were designated in collaboration with headquarters.

15. The prospects for the implementation of resolution WHA43.19 on the role of health research with its four major issues were presented in relation to the Region's new framework for health research: (1) health research policies and strategies; (2) national research capability-building; (3) national mechanisms for health research, and (4) technical cooperation among developing countries and international partnerships.

Conclusions

16. The regional health development "scenario" provides an overall framework for strengthening the management of the national health system, including its research capability. The strategies embodied in the Region's new framework for health research are in line with resolution WHA43.19.

17. While a number of regional programmes have identified research as an activity, efforts have to be strengthened to make these more concrete and for resources to be allocated. To maximize available resources for health research, one important regional strategy is to strengthen collaboration with the Office of Research Promotion and Development at headquarters and with the special programmes in their efforts to develop research and national capability to conduct it. The regional thrust would then focus on research promotion through integration in health programmes as a management tool for solving operational problems, and on the documentation of results to facilitate their utilization for decision-making.

Region of the Americas

18. Professor Soberon Acevedo, Vice-Chairman of the regional ACHR, presented the report on behalf of the Chairman and reviewed the main activities in health research carried out by PAHO since the last session of the global ACHR in 1988.

19. During this period, it had held its twenty-seventh meeting in September 1989. The agenda had included the reports of the subcommittees on health systems and services research and on biotechnology, an evaluation of the PAHO/WHO research grants programme, discussions on the conceptual framework and strategies of PAHO/WHO technical cooperation in research and development in health, and other matters. The discussions and recommendations on these topics were presented by Dr Soberon in the context of the report of the technical cooperation activities carried out by PAHO/WHO in the field of health research.

20. A great deal of effort in the Region has been expended in strengthening the research and development infrastructure in strategic areas through the design and implementation of regional programmes in biotechnology and health systems and services research. Both areas were selected because of their pivotal value in health development and their potential for energizing science and technology.

21. Although prior to 1987 PAHO/WHO had made efforts in support of initiatives in biotechnology by Member countries, those had been isolated events not responsive to specific objectives. To achieve a more integrated approach a subcommittee of the regional ACHR had been established. This subcommittee had prepared and presented to the regional ACHR a regional programme for infrastructure development in biotechnology in countries having a sufficiently strong base to guarantee enhanced growth with minimum investment. Several lines of work of this programme were being followed successfully. PAHO/WHO had supported research projects aimed at developing procedures for diagnosing blood-transmitted diseases through DNA recombinant techniques. One of them had led to the development of a diagnostic kit for AIDS, which was now being validated in two reference serum panels financed by the Organization. PAHO/WHO had also promoted meetings on topics leading to the definition of national policies in biotechnology and was working on a proposal to develop a regional capacity for the development, production and testing of vaccines.

22. The subcommittee on health systems and services research had met in May 1989 for the first time and discussed conceptual and operational aspects of such research in general and as it pertained to the local health systems (SILOS) in particular. The subcommittee had recommended the formulation of a regional programme for infrastructure development for health systems and services research and provided general guidelines for its implementation. The programme had been elaborated later by a working group and entailed a multicentre evaluative research project of the SILOS implementation process and, at the same time, a series of cooperative actions for strengthening the infrastructure such as manpower training and institutional support. Country-specific protocols should be ready by the end of 1990.

23. In the area of cooperation for the organization of scientific activity, a regional project to analyse the situation of health research in five Latin American countries had been initiated in late 1988. This project had been financed by the research grants programme and was continuing; it should yield a wealth of information on scientific and technological potentiality, research projects in progress, trends in scientific production from 1978 to 1988 and their relation to the socioeconomic characteristics of each country. The study would also provide an analysis of the existing scientific data banks and allow for the possibility of establishing links among them and with the Organization. Such links should permit the monitoring and analysis of major research trends in the Region on a regular basis. The results of the project would be discussed during the next regional ACHR meeting in 1991. Other activities in the administration of research and development included courses, workshops and seminars attended by personnel from institutions responsible for the coordination and management of health research.

24. The PAHO/WHO research grants programme, from 1986 to 1990, had financed 159 projects for a total of US\$ 2 519 684. Nearly 80% of the proposals received were rejected. Given the high number of projects rejected, the regional ACHR felt it necessary to recommend the implementation of new promotional and support mechanisms, among them the establishment of closer working ties with national research councils and the development of multicountry protocols in priority areas. By the end of 1989, working agreements had been established with six research councils.

25. Finally, Professor Soberon mentioned that a recent study had found 10% of the PAHO/WHO total budgetary and extrabudgetary resources to be assigned to research-related activities. That significant amount was distributed among the different operative levels of the Organization: the regional PAHO/WHO programmes at headquarters, the regional centres and the country offices. That situation poses the problem of coordinating all the activities to avoid fragmentation and duplication and to assure that resources were efficiently used. The regional ACHR and its subcommittees had been playing an important role in that endeavour and would continue to do so in the future.

South-East Asia Region

26. The report was presented by Dr S.D.M. Fernando, Chairman of the regional ACHR.

Highlights of the regional ACHR's activities

27. The most important activity which the regional ACHR had undertaken during the last two years, and which assumed added significance and relevance in the light of resolution WHA43.19, was the review of the role, function and working of the regional ACHR; the Regional Director had felt that, 15 years after its creation, it would be useful to look back, while at the same time squarely facing future challenges, and to chart its course. The fifteenth session of the regional ACHR had made that recommendation in 1989, and a consultative meeting composed of all past chairmen and the current Chairman, some past and current members as well as a few other eminent scientists, had been convened in February 1990. Its conclusions and recommendations had been considered by the sixteenth session in April 1990 which had endorsed them, adding a number of observations and comments of its own.

28. The consultative meeting had formulated the following conclusions and recommendations.

29. The regional ACHR was an advisory body to the Regional Director on matters pertaining to health research. It constituted one of the significant components of an interrelated system for the promotion and development of health research in the Region, including national medical research councils, analogous bodies and mechanisms, and supportive structures in the WHO Regional Office. It formed an integral part of the global system of ACHRs.

30. The advice given by the regional ACHR to the Regional Director constituted one of the first important steps in a series of interlinked activities, which included the development of the regional research programme and the promotion of research activities directed towards supporting health care programmes, which would ultimately result in an improvement of the health status of the people.

31. The regional ACHR should be concerned that its advice was implementable and implemented as well as effective, without being directly involved in the implementation and management of the programmes arising out of its advice. Its terms of reference were basically as relevant as when first formulated.

32. The consultative meeting was of the opinion that it would neither be desirable nor practicable for the regional ACHR to advise on the balance between different research areas and the components of the regional research promotion and development programmes.

33. The modus operandi of the regional ACHR could be improved to make it more effective by:

- developing a strategic plan for its own activities and by being more "pro-active" while being reactive to matters brought to its attention by WHO;
- by making appropriate arrangements to brief new members.

34. The sixteenth session of the regional ACHR endorsed the conclusion and recommendations of the consultative meeting for the review of its role, function and working and added some observations, the most important of which were that:

- the regional ACHR, being an advisory body, should not be directly involved in managerial and executive functions;
- while it may generally not be desirable or practical to advise on the balance between research areas and components of the regional research promotion and development programmes, such advice should be proffered, when, in particular instances, the regional ACHR deemed it advisable, keeping in mind the fact that the thrust and balance depended on a variety of factors, including the availability of resources, and that the final policy decision depended largely on national considerations;
- with respect to providing advice on the assessment and evaluation of the programmes, the regional ACHR should advise the Regional Director, if and when an independent assessment and evaluation of a particular regional programme for promotion and development of research was deemed necessary, and on the modus operandi for such an assessment and evaluation.

35. The fifteenth and sixteenth sessions of the regional ACHR, which took place in June 1989 and April 1990 respectively, considered, reviewed and made recommendations regarding research on several technical subjects, including accident prevention, nursing, oral health, tuberculosis and performance assessment and quality assurance in health care delivery.

36. The regional ACHR recommended the promotion of research on nursing in the context of research on health care - the utilization of existing mechanisms for this purpose including WHO collaborating centres for nursing - and the creation of national task forces.

37. It expressed its concern about tuberculosis as an undiminished public health problem despite long continued national control programmes. It recommended that WHO take a fresh look at BCG vaccinations as a control strategy and explore the potential of new developments in molecular biology and DNA technology for improving the vaccine, as well as methods of diagnosis. It recommended the convening of a task force on tuberculosis research.

38. Regarding research on quality assurance and performance assessment, it recommended that efforts be concentrated on development of methodology, indicators and standards relevant to quality assurance in primary health care.

39. The regional ACHR had also set up a subcommittee to make preparations for the Technical Discussions on the "Role of health research strategies for health for all by the year 2000" at the Forty-third World Health Assembly; the subcommittee had produced a document containing relevant information from the Region as a contribution to the documentation prepared by headquarters.

Regional research activities: promotion of research

40. The convening of intercountry consultative meetings and research study group meetings, national meetings, consideration of specific topics by advisory committees on health research and medical research council meetings, and provision of consultant services, have been the most effective means of promoting research on specific topics in countries, and a number of such meetings were supported.

41. The Regional Office published two volumes of research abstracts of projects supported by the intercountry project on research promotion and development and several monographs on research on specific areas are ready for publication.

Direct support of research projects

42. The Regional Office continued to support investigator-originated as well as collaborative research projects, and 67 research projects are currently being supported. On the 67, 38 are concerned with communicable diseases, four with environmental health, five with health of the elderly, six with health manpower development, one with health systems research, six with maternal and child health, one with mental health, one with nutrition, and five others.

Development of national mechanisms for research promotion

43. Meetings of directors of medical research councils and analogous bodies have effectively promoted the development and strengthening of national mechanisms for research promotion and coordination. Nine of the 11 countries in the Region have developed such mechanisms.

Research capability strengthening

44. Research capability strengthening has been an inherent part of the promotion and development programme from its inception.

45. More emphasis is now given to direct institution-strengthening for health systems research. The Regional Office started an institution-strengthening scheme in 1988 with a separate budget line. Institution-strengthening grants were awarded to two countries and plans for the 1990-1991 biennium are awaited from the countries.

46. There were 23 awards for visiting scientists' grants and research training grants in the period 1989-1990 (32 in the 1988-1989 biennium).

47. As at March 1990, there was a total of 63 active collaborating centres in the Region with a wide scope of functions ranging from health programme development to cardiovascular diseases. Some 20 centres are related to the programme areas of disease prevention and control, whilst 16 centres are concerned with diagnostic and therapeutic technology.

Other activities

48. The various special programmes, including TDR, HRP, the diarrhoeal disease control programme, the programme on acute respiratory infections and the Global Programme on AIDS make substantial contributions towards research and development in countries in accordance with their specific programme objective and strategies in coordination and collaboration with the Regional Office.

49. Member countries also utilize the WHO country-level budget to promote and support research and scientific activities in direct support of health programmes in countries. The total of such efforts of WHO is therefore considerable.

European Region

50. Professor A. Jablensky, Chairman of the regional ACHR, described progress towards a European health research policy. The present mandate of the regional ACHR was linked to target 32 of the European Region's health-for-all strategy. A milestone in the pursuit of this target had been the preparation and dissemination of the two volumes of "Research for health for all", a policy document giving details of the kinds of new knowledge required to support Member States in their collective endeavour. However, the implementation of such a policy in Europe was not without its problems, which were related to three main factors: (1) most of the relevant health research was being carried out by individuals, groups and institutions outside the ambit of the governmental authorities responsible for health policies and their implementation; (2) the European research community was strongly imbued with a sense of autonomy and freedom of intellectual pursuit; and (3) health research was a costly undertaking, and it was mainly governments that could ensure the necessary support. It was no small achievement that the region had the conceptual basis that should enable countries to formulate their own research policies.

51. Promotion of research for health for all policies. In addition to the publication of "Research for health for all" in the official languages of the Region (English, French, German and Russian) by WHO, four countries - Albania, Italy, Spain and Yugoslavia - had requested permission to publish the document in their national languages. WHO staff and members of the regional ACHR had acted as "ambassadors" for health-for-all research; two country visits, to Austria and Bulgaria, had taken place with this specific purpose, and at least four were planned. In two of the countries in the Region, Finland and Denmark, medical research councils had allocated and earmarked funds for projects following the development and adoption of national policies on research for health for all. Such a policy was also in preparation in Spain. The European Regional Conference of the International Epidemiological Association (Granada, Spain, February 1990) had included on its agenda a special session devoted to research for health for all.

52. At its last session, the regional ACHR had considered the need to update and revise, in part, the document on "Research for health for all". It had opted for a supplement which should describe recent developments in the Region, assess the significance of new scientific knowledge, and elaborate on the impact of those factors on health-for all research.

53. Strengthening research cooperation in Europe. Members of the regional ACHR and WHO staff had actively cooperated with the European medical research councils and the Commission of the European Communities (CEC). CEC was an important source of support to networks of institutions, groups and individuals engaged in biomedical, clinical and health services research. The Regional Office and the regional ACHR had been represented at two key meetings convened by CEC, one on the role of epidemiology and another on health services research. The latter meeting was significant for its request to WHO to provide a conceptual framework based on the policy of research for health for all.

54. Cooperation with the European medical research councils should also be noted for the jointly produced review of ethical issues in research.

55. Contributions to the global dimension of health research. The European contribution to the Technical Discussions at the Forty-third World Health Assembly on the "Role of health research in the strategy for health for all by the year 2000" had included a case study on perinatal care technology and an "update" on health services research in Europe. Through its academic and other research institutions, including several hundred WHO collaborating centres, the European Region was a major partner of the developing countries. This fact was not always given due recognition, and needed more explicit consideration in the future work of the regional ACHR.

56. Special issues reviewed by EACHR. In the course of the past year, the regional ACHR had reviewed several specific issues, problem areas and programmes:

- On monitoring of progress towards health for all and the development of indicators, it recommended a more flexible approach and the development of a European health interview survey.
- Recent developments which underlined the growing interest of Member States in quality assurance in health care had included a national meeting in Finland; a national consultation in Belgium; an international conference co-sponsored by WHO and the International Society for Quality Assurance; and the focus on quality in the "concerted action" initiative of the Commission of European Communities.
- The regional ACHR's review of the "Health impact of the environment" emphasized the need to study environmental etiology of diseases; the effects of low-dose radiation; and the advantages of small-area epidemiological case registers.
- A "brainstorming" session of the regional ACHR took place on predictions of the future of health care in Europe. The conclusions were cautiously optimistic as concerns the capacity of the Region to attain the health-for-all goals, but a number of risks and uncertainties were also highlighted.

57. Health research implications of recent socio-political changes in central and eastern Europe. The regional ACHR anticipated that there would be a deterioration in research activity in these countries before a recovery, and noted the following needs and priorities as regards health research: (1) it was important to facilitate the access of eastern European scientists to major international research bodies and networks, including granting agencies, the institutions of the European Community, the European Medical Research Council, the European Science Foundation, the European Molecular Biology Organization, etc.; (2) WHO could be instrumental in negotiating, on behalf of these countries, fellowships and other advanced training opportunities, especially in epidemiology, environmental studies, health services research, and health economics; (3) technical support should be provided in developing up-to-date health information systems; (4) research projects proposed by eastern European investigators and which met the criteria of the policy of research for health for all should be encouraged and supported.

58. The process of integration of health research efforts within Europe was a two-way movement enabling all participants to benefit. The countries of central and eastern Europe possessed a considerable pool of well-trained scientists, some of them excelling in particular areas of research. The free movement of researchers across national boundaries should be seen as a positive trend; if coupled with adequate efforts to reform and upgrade research institutions in these countries, it need not result in a depletion of skilled manpower.

59. Topics for further consideration by the regional ACHR. The plan of work of the regional ACHR for 1990-1991 envisages a further review of emerging research issues related to developments in central and eastern Europe; a review of the health implications of current research into the human genome; the impact of neuroscience and behavioural research on health care (a topic related to the "Decade of the Brain"). Other topics proposed for consideration include: environmental epidemiology; genetic variation in the response to environmental hazards; self-care and self-help in Europe, and financing of health care.

60. Proposed changes in the method of work of the regional ACHR. The development of national health research strategies was seen as the principal vehicle of implementation of research for health for all; the regional ACHR should serve as an "enabling" agency and as a resource to countries in this process. Trends in current research indicate that in the coming decade major scientific breakthroughs may be expected in molecular biology as applied to pathology and treatment of human disease, in early diagnosis, and in the introduction of artificial intelligence technology into the day-to-day management of health care. These developments and the rising costs of research-intensive technology in medicine make it imperative that policy-makers and authoritative representatives of the research community should be able to review together periodically new research findings and their implications. For this purpose it was proposed that the regional ACHR establish three subcommittees, on: (1) biomedical research; (2) epidemiology and clinical research; and (3) behavioural and social research related to health. If necessary, it might also convene special task forces on an ad hoc basis.

61. Reorganization of research promotion and development at the Regional Office for Europe. The regional ACHR supported the idea of establishing within the Regional Office a European health information centre supported by the Epidemiology, Statistics and Research unit and integrating the health-for-all data-base with the data-bases of specific regional programmes.

Eastern Mediterranean Region

62. The report was presented by the Chairman of the regional ACHR, Professor A. S. Majali.

63. The regional ACHR had held its fourteenth session in Morocco in April 1989 and its fifteenth session in Abu Dhabi in March 1990. While at both sessions the promotion of health research in the Region had been discussed, emphasis had been laid on health systems research, which was urgently needed for accelerating the implementation of health for all.

64. Health research and health systems research had been important agenda items at the thirty-sixth and thirty-seventh sessions of the Regional Committee.

65. The Region's task force mechanism for developing policies and strategies had been productive and was commended nationally, regionally and internationally. Task forces had visited Iran, Kuwait, Pakistan and Saudi Arabia. Their experience was documented both in Arabic and English, had been presented to the thirty-sixth session of the Regional Committee and had featured in the work of the subcommittee on health services research for the Technical Discussions held at the Forty-third World Health Assembly discussions in 1990.

66. Member States were encouraged to establish or strengthen focal points for health systems research within ministries of health. The regional research promotion and development unit, in collaboration with WHO representatives and countries, was compiling information on institutions, scientists and resource persons in health systems research.

67. A book on health systems research case studies for use in workshops had been completed. In order to further information on research the Regional Office published an Eastern Mediterranean regional health services journal twice a year, and distributed and translated "Bridge", the international newsletter on health systems research. Standard manuals of headquarters on health systems research were being translated into Arabic and further distributed.
68. The Regional Office was considering the promotion of commissioned research in subjects of common concern to countries, e.g., malaria.
69. There had been an increase in research grants, research training grants and visiting scientist grants. Countries were themselves funding similar grants relevant to their health needs.
70. The fourth intercountry meeting of national officers responsible for health research had been held in Cyprus in January 1989 in a promotional effort of national research management and coordination, with emphasis on health systems research.
71. The regional adviser on research promotion and development and senior managers from Morocco and Sudan had participated in an international workshop on health systems research held in Arusha, United Republic of Tanzania, in July 1990. They had managed to prepare regional and country workplans.
72. There were 32 collaborating centres in the Eastern Mediterranean Region, including five new ones. Two had been terminated. The activities of the collaborating centre on cancer in the Region had been discussed at the eighth meeting of the regional advisory panel on cancer in May 1989.
73. There had been two regional consultations on psychosocial research on AIDS, in March 1988 and 1989, and one on research priorities in accident and injury prevention. A consultation on a nutrition research and training centres network had been held in Tunis in August 1989.
74. WHO consultants had conducted two training courses on research methodology and development and management of health systems research in Saudi Arabia in 1988 and 1989. A consultant had assisted the College of Community Medicine in Lahore, Pakistan, to develop expertise in health systems research and a research academy in this field had been established. Another consultant had visited Iraq to assist in preparing for a second national workshop on health systems research and to assist with the preparation of the 1991-1995 plan for health systems research. A WHO consultant visited Qatar in December 1989 to help in the preparation of a research proposal on the system of referral from health centres to hospitals. Case studies for the development of health systems research had been prepared by a WHO consultant who visited Iran and Kuwait; they had been utilized at the Technical Discussions at the Forty-third World Health Assembly, on "The role of health research in the strategy for health for all by the year 2000". WHO consultants had further conducted workshops on health systems research in Cyprus and Iran in 1989.
75. The regional adviser on research promotion and development had visited the Pasteur Institute of Morocco in Casablanca in May 1990. An agreement had been reached for strengthening of the Institute and support for some research proposals.
76. The regional adviser on research promotion and development had also visited Oman in May 1990 in order to advise the Ministry of Health on the role and functions of a new unit of research and studies. Positive recommendations had been made regarding family planning and the establishment of a unit and elaboration of strategy for setting up human reproduction policy.

77. The units for research promotion and development and health programme development at the Regional Office had presented to the Regional Consultative Committee meeting held in October 1990 in the Syrian Arab Republic a paper on strategies for the implementation of the recommendations of the Technical Discussions at the Forty-third World Health Assembly on health research.

78. The Regional Consultative Committee had recommended that health systems research and the strengthening of research capabilities at country level, as two essential areas should be given due emphasis. Efforts should be made to change attitudes towards research and training of managers and personnel from the health sector. It had further recommended that all programmes should have an element of health systems research. Countries were to be encouraged to establish attractive career structures.

79. As an incentive the Regional Consultative Committee had recommended the establishment of an award for the best papers on priority topics in the countries both in basic and health services research, to be presented at sessions of the Regional Committee, commencing 1993.

80. The ethical aspects of research should be given due consideration. It had been agreed that national committees on ethical issues should be promoted to safeguard ethical human rights.

Western Pacific Region

81. The report of the regional ACHR was presented by Dr Tao Yixun, its Chairman.

Highlights of regional ACHR activities

82. The thirteenth session of the regional ACHR had been held in Manila in July 1990.

Subcommittee on health systems research

83. Major issues for the 1990s included equity, efficiency/effectiveness and quality of care. Equity issues included such aspects as delivery systems for hospital and community health care, health insurance (for which coverage must not discriminate against particular population groups) and drug availability. Efficacy/effectiveness issues included the question of centralized versus decentralized health care delivery, human resources and the changing role of health workers, comparative costs, management of change, and acceptable and appropriate technology. Quality-of-care issues included the need for quality assurance programmes, for which standards would first need to be set.

WHO regional centre for research and training in tropical diseases and nutrition

84. The regional centre, located in the Institute for Medical Research, Kuala Lumpur, Malaysia, had celebrated its tenth anniversary in 1989. During its first ten years 66 research training grants had been awarded for staff development; many staff had been increasingly successful in gaining research grants in open competition; and over 1100 scientific publications had been produced, together with many technical reports, information bulletins and some books. The centre had also been involved with research workforce strengthening through training courses and workshops, both in tropical diseases and in research design and methodology. Forty-seven courses and workshops had been conducted and 582 research workers trained.

85. It was planned to increase the scope of multiple country collaboration in research, and to emphasize clinical nutrition research.

Meeting of heads of health research councils or analogous bodies

86. Subjects discussed at the meeting of heads of health research councils or analogous bodies in 1989 had included a report of research promotion activities of WHO; areas in which problems might arise in research management; work of the WHO Regional Centre for Research and Training in Tropical Diseases and Nutrition; management problems in regard to technology transfer; human resources for research; selection of research priorities and interaction between health and other sectors for research; ways of achieving better collaboration between research councils; and the report on the Expanded Programme on Immunization, with particular reference to the possibility of eradication of poliomyelitis in the Region. Twelve country reports had also been received, which again indicated major differences between countries in regard to both the type of management structure for research and the extent of national health research programmes.

87. It was noted that communications needed to be improved between health research councils, ministries of health and relevant research bodies, including WHO collaborating centres, within each country. More affluent Member countries should be encouraged to support collaborative research projects with less developed countries.

88. The diversity of the Western Pacific Region in terms of socioeconomic development, health problems, and size of population made it difficult to generalize on many research issues, let alone to map out a single strategy for all situations. That disparity must be recognized and priorities must be worked out for specific countries or for subregional groupings on the basis of common concerns.

Research priorities in environmental health programmes

89. The regional ACHR noted that environmental issues were multisectoral and could not be adequately addressed by any single agency. Since WHO dealt mainly with ministries of health, its focus should be primarily on environmental effects on health. WHO should seek ways to document and disseminate information on those effects and thus draw the attention of other bodies to the problem.

90. The Committee considered that the research area was of sufficient importance to justify establishment of a new subcommittee on environmental health research. That subcommittee would be expected to promote research on the impact of environmental change on health. Its work could also encompass that of the present subcommittee on occupational health.

Research on accident and injury prevention

91. The regional ACHR recognized that the multifactorial nature of traffic injuries meant that collaborative research with other sectors (e.g., ministries of transport) was needed. Intensive education was also noted to be of great importance for accident prevention, especially in relation to alcohol use.

Research grants, research training grants and visiting scientist grants, and workshops on research design and methodology

92. It was reported to the Committee that recipients of the two types of grants and participants in the workshops between 1981 and 1989 had been contacted by mailed questionnaires and follow-up letters. The response rate for the 270 participants in the workshops was 44%; from 176 recipients of research grants, it was 62%, and for the 103 research trainees, 66%. It appeared that the workshops and the two types of grants had contributed to the strengthening of the research capability in the Member States. Positive outcomes from the programme were clearly evident in the replies received.

Research priorities in health promotion programme

93. The regional ACHR emphasized the great importance of health promotion and considered establishment of a mechanism for encouraging research activity in this field. For this purpose, it was recommended that a subcommittee on health promotion and behavioural aspects of health be established, the responsibility of which should include the work of the previous subcommittee on health behaviour research.

Regional research activitiesResearch training and related institution capability-strengthening

94. It was reported that thirty-two research training grants and visiting scientist grants, for a total value of US\$ 269 300, had been awarded in 1988-1989.

95. National workshops on research design and methodology in health research had been held twice in Papua New Guinea (1988, 1989) and once in Brunei Darussalam (1989). These were the tenth, eleventh and twelfth in a series of workshops organized since 1981.

96. During 1988-1989, 88 research contracts had been awarded for a total cost of US\$ 989 979.

Research-related meetings

97. The following meetings had been held in the Region in 1988-1989:

- (1) Twelfth session of the regional ACHR, Manila, 8-11 April 1988.
- (2) Regional working group on applied research on community-based rehabilitation, Cumberland, New South Wales, Australia, 25-29 July 1988.
- (3) National meeting of directors of collaborating centres in China, Shanghai, 16-18 November 1988.
- (4) Working group on rapid diagnostic test for leprosy, Manila, 29-31 March 1989.
- (5) Scientific group on development of vaccine for haemorrhagic fever with renal syndrome, Seoul, 1-3 May 1989.
- (6) Joint workshop with the South-East Asia Region on field research method for tropical diseases, Manila, 10-14 July 1989.
- (7) Regional health systems research seminar, Seoul, 8-11 November 1989.
- (8) Meeting of heads of all WHO collaborating centres in Japan, Tokyo, 4-5 December 1989.
- (9) Meeting of directors of health research councils or analogous bodies, Manila, 13-15 December 1989.

ACHR SUB-COMMITTEE ON HEALTH AND THE ECONOMY

Interim report by the ChairmanBackground

1. At its last session, in October 1988, ACHR discussed two papers relating to health in the context of the economy at large, presented by Professor Attinger and Professor Thorbecke: "Health development models", and "Health development and global economic trends".

2. Professor Attinger's paper summarized the results of investigations on the socioeconomic determinants of health in 72 developing countries over the last 25 years. In broad terms, the results indicated that the economic sector could be regarded as the main driving force for at least part of the health development process, but suggested that different mechanisms by which the various sectors were linked were sometimes operative. This indicated, for instance, that studies in greater depth in the countries concerned might open up rational new approaches to the planning of development policies.

3. Professor Thorbecke reviewed the impact of the international economic system on nutrition and health. Nutritional studies suggested that even in developing countries in which infant mortality and expectation of life had improved, the quality of life probably had not. While in some cases diseases of affluence as well as diseases associated with underdevelopment can be discerned from one country to another, the underdeveloped countries generally experienced undesirable effects on the patterns of agricultural production, nutrition and health as a consequence of agricultural protectionism in the developed world. Further, the impact of the debt problem in poor developing countries was severe, and structural adjustment had negative effects in such countries in the short- and medium-term. However, recommendations were available to alleviate this problem.

4. In considering these matters, ACHR recognized that much more needed to be understood about the way the process of socioeconomic development affected health, and in what way health affected development. The interaction of economic factors and health was seen as particularly important in the developing countries. The issue of "quality of life" was also seen as important, but indicators to measure this were lacking. In the light of these discussions, ACHR decided that a sub-committee be established to consider the issues raised and to investigate the opportunities and needs for research to support WHO's general remit to provide advice requested by Member countries and to meet the likely requirements of its own programmes.

Terms of reference

5. The first meeting of members, coopted members, advisers and observers took place in Geneva during November 1989. The group spent a day discussing the range of issues that could usefully be considered; based on the emerging consensus and taking account of the ACHR discussion which had led to formation of the sub-committee, appropriate terms of reference were formulated and agreed.

6. Broadly, the sub-committee felt that its first task was to identify important issues within its remit and give preliminary consideration to them before reporting back to ACHR, which would thus have the benefit of some expert appreciation of the depth of research needed to make substantive progress on these topics on a reasonable time-scale.

7. The tenor of discussions in ACHR already made it clear that the deliberations of the sub-committee should range much beyond the concerns of health economics. Indeed, it was evident from the outset that the sub-committee should mainly focus on the constraints and

opportunities that exist because of the interaction of health and other parts of the entire socioeconomic system. For this reason the sub-committee decided that its title should be "health and the economy", to reflect the generality of concerns and the fact that it intended no explicit overlap with activities already under way or planned on the subject of health economics. Nevertheless, the primary part to be played by economics in planning the efficient use of resources for health care provision was accepted as justifying significant attention. So three of the terms of reference substantially or wholly fall within the purview of health economics. Equally, it was seen that there are important issues of social science to be considered, and complex methodological issues arising in health systems research, in the elaboration and validation of indicators, and of course in delineating the mechanisms by which health is involved with other sectors.

Topics for consideration

8. The sub-committee divided into two sub-groups to consider those issues concerning health economics on the one hand and measurement and analysis on the other. In its discussions, each group identified a number of topics which were regarded as matters with priority, and various members agreed to prepare informal discussion papers on these topics, for consideration by members of the sub-committee or one of its sub-groups.

Health economics

9. Three major areas of concern were identified, considering that the link between food consumption, nutritional status and health status is a major responsibility and concern for WHO. The following summary was provided by the first sub-group:

Macroeconomic policies (including structural adjustment) and health

10. Research on risk to health from an unfavourable economic environment:

- (a) research on deterioration of health conditions;
- (b) research to identify and concentrate on countries where health status worsened during the stabilization and structural adjustment programmes and explain which policies affected health negatively and through what mechanisms;
- (c) research to determine, within countries, which socioeconomic groups appear to have been most affected and again, through which set of policies;
- (d) research to identify and explore a number of success stories in the face of an unfavourable external environment;
- (e) research to explore some extreme cases of deterioration and its impact on other sectors such as education, as well as the feedback effects.

Stabilization policies and health

11. Considering their impact on health, how can stabilization policies be improved?

- (a) research on how to design these policies with a greater regard for health considerations;
- (b) research on how and to what extent health indicators can be included in conditionality agreement;
- (c) research on how health indicators can be actually monitored;

(d) research on what kind of rewards/incentives can be offered to countries maintaining or improving the health status of their vulnerable groups (e.g., through "debt-swap");

(e) research on which among the set of structural adjustment instruments are the ones least harmful to health (this would entail a comparison of various fiscal and/or monetary policies to determine the best possible mix).

Research priorities in food and nutrition

(a) Agricultural price policies

12. Price policies affecting producer and consumer prices affect food consumption in various socioeconomic groups differentially. Net producers may be discouraged from following a devaluation which raises producer prices and may be able to improve their food consumption. On the other hand, food consumption for net consumers will be negatively affected. Likewise changes in food subsidies affect real income, food consumption and nutrition in different groups differently. It might be relevant to design studies which attempt to link different policy interventions to their ultimate direct and indirect effects on food consumption, nutritional and health status.

(b) Studies of food poverty levels

13. There is a need for empirical studies of food poverty levels (determining the necessary income required to purchase or obtain the recommended intake of major nutrients and, more specifically, calories) given regional or group-specific preferences and relative prices. In particular, the relation between surveys of food consumption and surveys providing indicators of nutritional and health status as well as anthropometric measurements might be studied.

(c) Targeting schemes

14. Empirical studies to identify efficient targeting schemes for improving food consumption might be desirable. Universal schemes where benefits are received by all households entail high "leakage" while schemes mainly targeted to specific vulnerable groups entail very high administrative costs. To what extent can food commodities be subsidized which are desired by the poor, but only in a very limited way by the rich, so as to minimize "leakage"?

Techniques

15. The approach spelt out in paragraph 69 of the report of the twenty-ninth session of ACHR (document ACHR29/88.15) was strongly endorsed.

Measurement and analysis

16. The second sub-group identified both methodological and analytical issues.

(1) Understanding the effects of health measures and standards on other sectors requires the identification of the pathways and quantitative determination of the effects and their periodicity - all of which may alter from one sector to another. "What is known; what needs to be known?" "What methodology is needed: what is available?" These are the kind of questions that must be raised in order to determine what methodological research is essential and what information the resulting techniques should yield.

(2) It is essential that the results of measures should not be judged before sufficient time has elapsed. In unfavourable circumstances a crisis situation may arise before such measures take effect, the avoidance of which requires timed and ordered supplementary action in other sectors. The existence and scale of such a time-lag need investigation, as does the whole phenomenon of delayed effects.

(3) A wider appreciation is needed of the limitations of econometric modelling, especially in the context of system elucidation. However, developments in knowledge-based modelling as a supplement to econometric modelling may improve the value of the modelling approach - especially in helping to identify the important considerations and steps of taking policy decisions concerning the use of resources for health development.

(4) Health outcomes of social processes. It is important to recognize the interdisciplinary nature of health research and the vital consequence of establishing and maintaining intersectoral communication. But what methods can be used?

(5) Health variables, as required for socioeconomic investigations, are often unreliable and inconsistent. How is it possible to make them more reliable and consistent? Other methods of measuring the quality of "health" are needed. Epidemiological methods, used on a sampling basis, might offer a worthwhile approach if costs could be kept down. It was suggested that the appearance of specific diseases, e.g., coronary heart disease, is a useful indicator of the "epidemiological transition" from a state dominated by "poverty diseases" to one also affected by the diseases of affluence. But in any event better indicators in the health sector are needed, together with an understanding of how and why they alter (as they are expected to do) with scale and time.

(6) Cost-benefit and cost-effect analysis and evaluation procedures need attention. For instance, what is meant by "benefit"? Who benefits? And what is meant by cost? Indirect costs also exist; should they be taken into account? What is the basis for policy decisions to distribute resources to meet major multisectoral demands?

(7) Intercountry studies of health status are thought to be important in helping to study the influence of various factors operating at primary health care level. Countries vary widely in economic circumstances. How does this influence the response to primary health care measures, and why? Similar questions apply to intracountry comparisons. The appropriate methodology is not clear.

(8) For the purpose of socioeconomic analysis in relation to health, an essential information list is needed. This should specify the minimum data that, in sufficiently reliable form, a country needs to collect in order to make basic analyses. Work is needed on the choice of simple robust variables, on methodology for capturing the data, and on quality testing and assurance. But not all information exists in the form of numerical data. Much valuable information and experience - expert observations, for instance, and much information important to health and to socioeconomic issues in relation to health - exists in other forms. There is a need to start collecting such data in a form that is accessible and usable. This requires a method of storing knowledge in a systematic way, so that its logical content can be used, employing inference techniques to extend its scope into regions of valid inference. This is a major methodological task - to specify what information is needed, how it should be expressed, and how it should be stored to form a sensible "knowledge base".

(9) Future problems and trend analysis. New problems are certain to arise. What are they likely to be? And what are the trends in health that we should be identifying? What are the best procedures for trend identification and interpretation?

On-going activity

17. A number of detailed but informal papers have been produced already. I anticipate that the consultations on these could lead to a critical outline of, and commentary on, important research issues, for subsequent communication to ACHR.

18. It is already clear that research to meet the objectives sketched by ACHR will be strongly multidisciplinary. There are major research teams in science and technology that have developed many apposite techniques and methods; it should not be difficult to interest them in the problems identified here.

RESOLUTION WHA43.19 OF THE FORTY-THIRD WORLD HEALTH ASSEMBLY ON THE
ROLE OF HEALTH RESEARCH

The Forty-third World Health Assembly,

Noting the conclusions of the Technical Discussions on the role of health research in the strategy for health for all by the year 2000, in particular the recommendations dealing with health systems research, nutrition research, research capability strengthening and recent advances in biological and physical sciences and their implications for health care;

Noting that all national health policies should be based on valid scientific evidence, and that such evidence requires health research;

Recognizing the significant potential of research in promoting health and its vital role in improving health through the application of solutions that are already available and the generation of knowledge for the development of new solutions;

Noting the worldwide mismatch between the burden of illness, which is overwhelmingly in the Third World, and investment in health research, which is largely focused on the health problems of industrialized countries, and the fact that many developing countries lack the scientific and institutional capability to address their particular problems, especially in the critical fields of epidemiology, health policy, social sciences, nursing and management research;

1. CALLS ON all Member States to undertake essential health research appropriate to national needs in order to:

- (1) identify and understand their own priority health problems;
- (2) improve the use of limited resources;
- (3) improve health policy and management;
- (4) foster innovation and experimentation;
- (5) contribute to new knowledge;

2. URGES Member States, particularly developing countries:

- (1) to define national health research policies, and strategies for their implementation;
- (2) to build and strengthen national research capabilities by investing resources in national institutions, by providing appropriate career opportunities to attract and retain their own scientists, and by creating environments that will foster scholarship and creativity;
- (3) to create, or strengthen, mechanisms that facilitate consideration of research results at the policy-making level, as well as their translation into health systems operation;

(4) to collaborate with other countries through international partnerships in developing research and training capabilities, particularly in relation to their high priority health and organizational problems, thereby also contributing to national development efforts;

3. URGES bilateral and multilateral development agencies, nongovernmental organizations, foundations and appropriate regional organizations:

(1) to increase their support for essential health research and for research capability building;

(2) to support and strengthen, in the health and related science and technology sectors, national coordinating mechanisms to promote research, policy-making, planning and management;

(3) to support the development of international partnerships to strengthen national scientific and research infrastructures and countries' capabilities to absorb technology and solve problems;

4. INVITES the research community:

(1) to increase its commitment to the development of essential health research appropriate to national needs and its participation in research on global health problems;

(2) to intensify its efforts in communicating research findings and in developing technology to support decision-making and resource allocation processes;

(3) to mobilize its human and material resources with a view to strengthening international scientific networks oriented to health development;

5. REQUESTS the Director-General:

(1) to ensure the wide distribution of the report of the Technical Discussions on the role of health research in the strategy for health for all by the year 2000 among ministries of health and other relevant ministries, universities, research centres and institutions dealing with science and technology;

(2) to use appropriate mechanisms, in close collaboration with the global and regional Advisory Committees on Health Research, to: (a) assess new and emerging areas of science and technology; (b) investigate evolving problems of critical significance to health; (c) identify appropriate methodologies for trend assessment and forecasting, including epidemiology to improve health;

(3) to develop further a clearly enunciated health research strategy for WHO in order to translate the research goals, priorities and programmes into coherent and coordinated action in support of health for all;

(4) to promote the harmonization of science and research policies in health between WHO, the United Nations system and other international agencies and organizations;

(5) to develop more effective institutional arrangements for strengthening the research capabilities of Member States, with special emphasis on disciplines of critical relevance to public health;

(6) to explore the possibility of making specific provision within WHO's total resources to support the strengthening of health-related research capabilities in Member States;

(7) to report through the Executive Board to the Forty-fifth World Health Assembly on progress made in implementing this resolution.

(Fourteenth plenary meeting, 17 May 1990 -
Committee A, third report)

COUNCIL FOR INTERNATIONAL
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GENETICS, ETHICS AND HUMAN VALUES

Human Genome Mapping, Genetic Screening and Gene Therapy

The Council for International Organizations of Medical Sciences held its XXIVth Round Table Conference, on the subject of Genetics, Ethics and Human Values: Human Genome Mapping, Genetic Screening and Therapy, in Tokyo and in Inuyama City, Japan, from 22-27 July 1990. The Conference was held under the auspices of the Science Council of Japan, and cosponsored by the World Health Organization and the United Nations Educational, Scientific and Cultural Organization. It was the fifth in a series entitled Health Policy, Ethics and Human Values: An International Dialogue, begun in Athens in 1984. The participants, numbering 102, came from 24 countries, representing all continents.

In addition to biomedical scientists and physicians, the participants represented a wide range of disciplines including sociology, psychology, epidemiology, law, social policy, philosophy and theology, and brought with them experience in hospital and public health medicine, universities and private industry, and the executive and legislative branches of government. Through presentations and discussions in plenary sessions and working groups, they reached broad agreement on a number of central issues. At its final session the Conference agreed on the following Declaration.

THE DECLARATION OF INUYAMA

I. Discussion of human genetics is dominated today by the efforts now under way on an international basis to map and sequence the human genome. Such attention is warranted by the scale of the undertaking and its expected contribution to knowledge about human biology and disease. At the same time, the nature of the undertaking, concerned as it is with the basic elements of life, and the potential for abuse of the new knowledge which the project will generate are giving rise to anxiety. The Conference agrees that efforts to map the human genome present no inherent ethical problems but are eminently worthwhile, especially as the knowledge revealed will be universally applicable to benefit human health. In terms of ethics and human values, what must be assured are that the manner in which gene mapping efforts are implemented adheres to ethical standards of research and that the knowledge gained will be used appropriately, including in genetic screening and gene therapy.

II. Public concern about the growth of genetic knowledge stems in part from the misconception that while the knowledge reveals an essential aspect of humanness it also diminishes human beings by reducing them to mere base pairs of deoxyribonucleic acid (DNA). This misconception can be corrected by education of the public and open discussion, which should reassure the public that plans for the medical use of genetic findings and techniques will be made openly and responsibly.

III. Some types of genetic testing or treatment not yet in prospect could raise novel issues - for example, whether limits should be placed on DNA alterations in human germ cells because such changes would affect future generations, whose consent cannot be obtained and whose best interests would be difficult to calculate. The Conference concludes, however, that for the most part present genetic research and services do not raise unique or even novel issues, although their connection to private matters such as reproduction and personal health and life prospects, and the rapidity of advances in genetic knowledge and technology accentuate the need for ethical sensitivity in policymaking.

IV. It is primarily in regard to genetic testing that the human genome project gives rise to concern about ethics and human values. The identification, cloning, and sequencing of new genes without first needing to know their protein products greatly expand the possible scope for screening and diagnostic tests. The central objective of genetic screening and diagnosis should always be to safeguard the welfare of the person tested: test results must always be protected against unconsented disclosure, confidentiality must be ensured at all costs, and adequate counselling must be provided. Physicians and others who counsel should endeavour to ensure that all those concerned understand the difference between being the carrier of a defective gene and having the corresponding genetic disease. In autosomal recessive conditions, the health of carriers (heterozygotes) is usually not affected by their having a single copy of the disease gene; in dominant disorders, what is of concern is the manifestation of the disease, not the mere presence of the defective gene, especially when years may elapse between the results of a genetic test and the manifestation of the disease.

V. The genome project will produce knowledge of relevance to human gene therapy, which will very soon be clinically applicable to a few rare but very burdensome recessive disorders. Alterations in somatic cells, which will affect only the DNA of the treated individual, should be evaluated like other innovative therapies. Particular attention by independent ethical review committees is necessary, especially when gene therapy involves children, as it will for many of the disorders in question. Interventions should be limited to conditions that cause significant disability and not employed merely to enhance or suppress cosmetic, behavioural or cognitive characteristics unrelated to any recognized human disease.

VI. The modification of human germ cells for therapeutic or preventive purposes would be technically much more difficult than that of somatic cells and is not at present in prospect. Such therapy might, however, be the only means of treating certain conditions, so continued discussion of both its technical and its ethical aspects is therefore essential. Before germ-line therapy is undertaken, its safety must be very well established, for changes in germ cells would affect the descendants of patients.

VII. Genetic researchers and therapists have a strong responsibility to ensure that the techniques they develop are used ethically. By insisting on truly voluntary programmes designed to benefit directly those involved, they can ensure that no precedents are set for eugenic programmes or other misuse of the techniques by the State or by private parties. One means of ensuring the setting and observance of ethical standards is continuous multidisciplinary and transcultural dialogue.

VIII. The needs of developing countries should receive special attention, to ensure that they receive their due share of the benefits that ensue from the human genome project. In particular, methods and techniques of testing and therapy that are affordable and easily accessible to the populations of such countries should be developed and disseminated whenever possible.