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WHO RESEARCH: A GLOBAL VIEW

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1. Introduction

WHO's research, in financial terms, is a minute proportion of the world's research effort. Its role, however, is much larger than its budget would suggest. Furthermore, health being intricately related to other social sectors, the Organization must address health problems as a function of all the relevant features of the world social situation. Health Research is deeply rooted in WHO as reflected by the Organization's history as far back as the days of its founding fathers.

2. Worldwide Research and Development

The world spends approximately 2% of its G.D.P. on Research and Development. At present market prices, this is in excess of 200 bio.$. The share of the U.S.A. in this expenditure is in the order of 35-40%.

Health-related research is estimated to range between 6-12% of overall Research and Development, which would imply, for the world an expenditure of 12-24 Bio.$, and for the U.S.A., 5-10 Bio.$ approximately. (1) In 1984-85, the total WHO budget for research-related activities was 130'949'800$, (more than 90% of which from extra-budgetary resources). This represents, less than 0.5% of the worldwide health-related research effort. (2)

3. Current Socioeconomic Trends.

The world population increases by more than 80 million each year, 90% of the increase occurring in the South; 2000 million people live on very low wages, 600 million have no jobs and some estudies estimate that in Africa and Latin America most of the labour force incorporated during the 1980s will be without employment in 1990. (3) Yet, urbanization is growing, to the extent that by year 2000, 2/3 of the world's urban dwellers (2 Bio. people) will be in the developing countries. (An increase over 25 years by a factor of 2.5). Coverage with water and sanitation is making progress, and in view of current and expected investments, the situation should improve greatly over the next few years. International solidarity is also coming into play to address the problem of food; however in most developing countries, national production, marketing and distribution policies have to improve considerably if the poor are to satisfy their basic needs. Progress in literacy and education is slow, the time-lags are long, and the quality of service difficult to measure. Yet, education is the core of socioeconomic development.

4. Health-related research in WHO

The world health situation is intricately related with that of other social sectors, as shown by the preceding considerations. The resources of

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(1) Source: Report on the World Social Situation (U.N., 1983)
(2) Source: WHO proposed Programme Budget for 1986-1987
(3) Source: EB77/20, 1986

* Presented by Dr. B. G. Mansourian.

WHO are disproportionate in relation to the problems addressed, particularly so in the area of research. Still, there is a consensus that WHO can play a useful and decisive role in health research and it has indeed done so over the last few decades. There are many contributions which WHO is expected to make in health research, using catalytic-type inputs, and the related policy guidelines will be outlined below. The way in which the Organization has coped with its functions in research evolved over the years and this will be briefly reviewed. (4) Finally, in the light of the Health for All movement, a global strategy for health research has deemed to be necessary and its principal features are recalled. (5)

4.1 Official policy guidelines for WHO research.

4.1.1 The conduct and the coordination of research are essential functions of WHO (WHA2.19, 1949).

4.1.2 In the discharge of these functions, the Organization must:

(a) promote international cooperation in the field of research (WHA30.40, 1977) and, to that end, establish or maintain close contacts with national and international bodies dealing with similar programmes (WHA28.70, 1975);

(b) ensure the appropriate transfer of existing and new scientific knowledge to those who need it (WHA30.40, 1977);

(c) promote the application of such knowledge (WHA29.64, 1976), in particular by collecting and transmitting to the Member States information and the results of experience regarding the most rational ways of making practical use in health programmes of scientific advances (WHA25.60, 1972);

(d) intensify on-going collations and analyses of the long-term biomedical research forecasts and prognoses of Member States and appropriate international organizations to guide the Organization in its own work and long-term programming (WHA28.70, 1975; WHA30.40, 1977);

(e) give priority to research directly relating to its programmes (WHA2.19, 1949) and to the identification of scientific problems whose solution is of particular importance for the Organization (WHA28.70, 1975);

(f) identify those fields of biology and medical sciences in which there is the greatest prospect of advance (WHA25.60, 1972);

(4) Source: EB63/PC/WP/78.7
(5) Source: EB77/INF.DOC/8

(g) provide guidance for the effective coordination of national research efforts (WHA29.64, 1976), particularly those of research institutions in countries that show a readiness to participate and to provide appropriate facilities and manpower to collaborate on problems of prime importance to WHO (WHA25.60, 1972; WHA28.70, 1975);

(h) strengthen national research capabilities, particularly in developing countries (WHA29.64, 1976; WHA31.35, 1978) with regard both to the strengthening of research and training centers (WHA27.61, 1974) and to the training of research workers (WHA15.52, 1962), especially young staff who wish to work in biomedical research (WHA25.60, 1972). WHO has an important role to play in increasing the general potential of the world in terms of qualified scientists (WHA12.17, 1959).

4.1.3 Proper emphasis should be laid, in regard to research, on those aspects which are peculiarly international in character (EB13.R78, 1954), e.g., the development and elaboration inter alia of: (a) opportunities and methods for international cooperation in the biomedical sciences; (b) standardization of research techniques, when feasible; and (c) standardization of nomeclature and terminology to ensure the comparability of results (WHA25.60, 1972).

4.1.4 Effective biomedical and health services research activities aimed at the solution of major health problems of Member States, especially of developing countries, play an increasingly important role in technical cooperation between WHO and Member States (WHA30.40, 1977; WHA31.35, 1978).

4.1.5 There must be greater regional involvement in research (WHA30.40, 1977) for:

(a) the elaboration of the WHO long-term programme of development and coordination of biomedical and health services research (WHA30.40, 1977);

(b) the development of appropriate programmes of biomedical research at the regional level, including the setting of research goals and priorities in the regions in response to the expressed needs of Member States (WHA28.70, 1975; EB59.R12 and WHA30.40, 1977).

4.1.6 Recognition is given to the concept of special programmes for research and training in major mission-oriented programmes of the Organization (WHA30.40, 1977; EB61.R36, 1978).

4.1.7 The importance of ethical problems is growing with the development of biomedical and health services research (WHA29.64, 1976).

4.1.8 The WHO research programme must be financed through specific provisions made in the Organization's regular budget (WHA12.17, 1959) and additional financial support from Member States and voluntary agencies (WHA27.61, 1974, inter alia).

4.2 Historical background

The evolution of WHO's interest and activity in research in the first 30 years of its existence can be divided into three periods of unequal lengh.

The first started at the very beginning of WHO. In 1949, the Second Health Assembly affirmed in resolution WHA2.19 that "research and coordination of research are essential functions" of WHO and set out five guiding principles for research and research management. Medical research was subsequently carried out for about a decade, as an integral part of WHO's programme and as required by the development of that programme.

The second period began with the proposal, in 1958, for an "intesified research programme" and the setting up, in 1959, under resolution WHA12.17, of the ACMR and the Special Account for Medical Research. The development of the intensified programme was described in two reports by the Director-General, covering the quinquennial periods 1958-1963 and 1964-1968. This programme continued until the early 1970s and led to considerable expansion of WHO's research activities.

New preoccupations progressively emerged with regard to the significance of research in relation to health development and to the role of the different operational levels of the Organization in the formulation and execution of research activities. In 1972, and soon after, in 1974, resolutions WHA25.60 and WHA25.61 opened a new era in the evolution of research in WHO. It is this last period which is of particular interest at present.

Early in the third decade of the life of the Organization, while the "research programme" continued to be actively pursued, WHO's Member States and governing bodies, as well as its Secretariat, began to raise questions regarding WHO's mission, the relevance of its programme to its social aims, and the effectiveness and efficiency of its work. This concern led to profound reorientations that affected, in particular, the research component of the programme. The reorientations were the result of an unprecedented series of resolutions of the Health Assembly and the Board bearing on the new programme policy and strategy and, also, specifically on research and research management.

The deterioration of the financial situation resulting from the international monetary crisis has had severe repercussions on WHO's research activities, which were the most exposed to and suffered most from the successive reductions imposed on the regular budget. Activities financed from extrabudgetary sources, such as the Special Programme of Research, Development

and Research Training in Human Reproduction, remined practically unaffected, and new programmes, such as Tropical Disease Research and Control of Diarrhoeal Diseases expanded considerably.

Growing emphasis began to be laid on the long-term planning of health development, particularly by the Health Assembly and the Board. In January 1978, the Board requested its Programme Committee "to propose strategies for attaining an acceptable level of health for all by the year 2000, taking into account long-term health trends". Such strategies must of course include a research support element.

The landmark of the seventies has been the decentralization and the development of regional research programmes under the auspices of regional ACMRs. The Alma-Ata declaration and the subsequent adoption of a global strategy for health for all have had obvious implications for the Organization's research activities. The need for a global strategic framework for WHO research was unequivocally expressed by the Director-General at the 1983 meeting of the global ACMR. A subcommittee on Health Research Strategy, chaired by Professor T. McKeown, set out to develop a report which was reviewed by the global and regional ACMRs over the following two years, and adopted by the global ACMR in October 1985.

4.3 A global strategy for health research in WHO

A document entitled "Health Research Strategy for HFA/2000" was presented for information to the Executive Board in January 1986, in conjunction with the progress report on the ACMR. The report was praised by the Board. The main conclusions of the strategy report are recalled below:

"Disease is not an inescapable attribute of the human condition; except when determined at or soon after fertilization, it results essentially from unhealthy ways of life and can be prevented if those ways can be changed.

For almost the whole of his existence man, like other living things, was unable effectively to control his environment or limit his reproduction, and the chief causes of sickness and death were deficiencies of basic resources or hazards arising from competition for them. These are still the predominant causes of disease in developing countries.

In developed countries during the last few centuries it has been possible to exercise a considerable degree of control of the environment - in relation to health, particularly by increasing food supplies and improving hygiene - and, for the first time in human experience, the advances were not lost because of rising numbers. These advances have led to the decline of diseases (chiefly the infections) due to deficiencies and hazards; but, ironically, they have resulted in a new pattern of noncommunicable diseases attributable to profound changes in the environment and in behaviour.

The research strategy of WHO should be devised primarily in the light of the commitment to substantial progress in health by the year 2000,

particularly in countries where the need is greatest. Against the background of the preceding analysis the following are the steps which are likely to lead to rapid advance:

(1) Control of diseases associated with poverty. The research needed is essentially of the health systems type, as the effective measures are well known: provision of sufficient and safe food; clean water; adequate sanitary facilities; fertility regulation; immunization and treatment of common infections. Individuals and communities have important roles to play in relation to their own health behaviour and to ensure implementation of the required measures. The aim of research should be to assist administrations and communities to achieve these advances as directly and quickly as possible.

(2) Control of diseases, both infectious and noncommunicable, specific to the tropics. These diseases do not respond adequately to the relief of poverty and the measures referred to under (1) and they should be attacked with all the resources - laboratory, clinical, epidemiological and socioeconomic - that can be brought to bear on them.

(3) Control of diseases associated with affluence. This requires investigation of the environmental and behavioural influences which have led to the noncommunicable diseases now predominat in developed countries and beginning to appear in the developing world. In some, the major influences (tobacco, alcohol, occupational hazards, etc.) are already known, and the research required is predominantly concerned with behaviour; in others, the influences are unknown and research, particularly epidemiological, is needed into disease origins.

(4) Treatment and care of the sick. Even on the most optimisitc assumptions about disease prevention, it will be necessary to make extensive provision for the treatment and care of the sick. For this we must rely mainly on biomedical research (which also, of course, contributes powerfully to the preventive measures). WHO's contribution, although modest financially, will continue to be important. It contributes to the success of biomedical research in many ways, particularly by ensuring that new knowledge which becomes available is widely known and quickly applied.

(5) Delivery of health services. The critical determinants of health should be addressed through health services that are relevant to local needs had cultures and aim to cover entire populations, particularly the most vulnerable groups. To join with policy-makers and communities in assessing needs, planning, financing and implementing programmes and evaluating them in terms of coverage, efficiency and effectiveness is the challenge for WHO in health systems research.

The application of these principles will inevitably differ between regions and between countries within the same region, according to many variables: the nature of the predominant health problems; the present level of health; economic resources; cultural, political and religious traditions. However, the aim should be common to all: to focus research where it will result in rapid advance to the health for all goal of improved health.

Without neglecting the care of the sick, the strategy places the emphasis on achievement of health through prevention of disease. This approach in the short- and medium-term does not overlook the long-term objectives which WHO has always set for itself, based on recognition of health as a state of complete physical, mental and social well-being. The achievement of these obectives does of course depend on advances in society, many of which are not within the responsibilities of health administrations: particularly elimation of poverty; universal education; full and rewarding employment; and most important of all, avoidance of war in all its forms."

These conclusions can be seen to be perfectly consistent with the declared precepts of the Organization in respect of its operational activities, such as:

(a) Strengthening of the scientific and technological infrastructure. One of the main reasons for underdevelopment is the lack of the appropriate infrastructure which exists in industrialized countries. If the research capability of developing countries is to be enhanced, appropriate human and material resources need to be available. Such resources include a wide span of facilities, from workshops and libraries to transport and telecommunications.

(b) Developement of manpower resources. The balance between qualified scientists and other personnel is particularly important. At various levels (laboratory, clinical, field) scientists may become unproductive in the absence of other workers such as mechanics, nurses or social workers. The teamwork approach is needed at all levels, but particularly where contact with the community is indispensable for the promotion of health.

(c) Community participation. If research is to be undertaken at the first level of contact between people and the health system, the individuals, families and communities concerned need to assume some responsibility and to contribute to their own health development. For example, the community needs to be involved in assessment of the situation, the definition of problems and the setting of priorities; and each individual should realize that he can, by his own behaviour, have a profound impact on his own health.

(d) Intersectoral coordination. All sectors involved in socioeconomic development are interdependent. Education is at the base of development. Agriculture plays an important role in securing sel-sufficiency in food. Housing is critical for a healthy

environment, including a safe-water supply and efficient waste-disposal system. Public works and communications are essential to the functioning of all services and to effective interactions between people. In relation to the quality and effectiveness of the educational system, the agricultural pricing structure and the distribution of urban and periurban services, many questions remain unanswered. Although these may appear to lie outside the sphere of competence of WHO, their relevance to health is indisputable. Research in all these areas is crucial to health development as there are still many gaps in knowledge.