ADVISORY COMMITTEE
ON HEALTH RESEARCH

ACHR/25/RD

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WASHINGTON, D.C.

REPORT TO THE DIRECTOR

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION
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XXV MEETING OF THE ADVISORY COMMITTEE ON HEALTH RESEARCH

INAUGURAL SESSION

1. Statement by the Chairman of the Advisory Committee on Health Research

In his inaugural statement, Dr. Robbins, Chairman of the Committee, welcomed all those present and then spoke of the world economic crisis and its impact on research development. He said that the crisis was affecting not only countries without a proper research infrastructure, but also those in which research was considerably developed. As an example, Dr. Robbins referred to the financial situation of the Medical Research Council of the Caribbean Community, which had held its XXXI Meeting from 16 to 18 April and was finding it difficult to collect even the minimum contribution of US$600 from some of its member countries.

The Chairman urged the members to take this situation into account in making their recommendations to the Director. In addition, he suggested that those recommendations should be such as to guide the Organization in its role as coordinator of the few resources available to the countries in the Region, and help it promote the collective use of those funds.

Dr. Robbins referred to the visit to the National Institutes of Health of the United States, scheduled for Tuesday, 22 April, and then to the Committee's successful meeting in Havana in July 1985. He said that, if Dr. Alina Llop had been present at this meeting, he would have liked to thank her once again for the work she had done on that occasion and for the kindnesses to the members of the Committee on the part of the health authorities of Cuba.

Dr. Robbins had been advised that Dr. Llop was unable to be present because she had not been granted a visa for entry into the United States of America.

On completing his brief presentation, the Chairman gave the floor to the Director of the Pan American Sanitary Bureau (PASB).

2. Address by the Director of the Pan American Sanitary Bureau

The Director of the PASB delivered the following address:

"This meeting has a very special significance: with it the Committee reaches the quarter-century mark. This an opportunity to reflect on what we have done in those twenty-five years, not going too deeply into the past but rather looking to the prospects for the future. It is a pity that Dr. Horwitz, during whose tenure the Committee was established, could not be with us today because he is travelling, but we hope he will be able to join us at some point in the course of the week.

"It is interesting to note the profound changes that have taken place since the Committee's first meeting in 1962 and the amazing relevance today of some of the points in its first report. The Committee came into being at a time when the biomedical paradigm was dominant, despite which it was able to perceive that research would have to be pursued in more than just biomedicine if it was to contribute to the improvement of health and of science and technology in the Region, and to the transformation of life in our societies, including the organization of health services.

"If we consider the changes that have taken place in science, we see that in 1962 most of the countries lacked any scientific or technological infrastructure. There seemed to be no concern for developing it, and the Organization was only beginning to realize its importance. Since then, most of the countries have established institutions, some of them powerful, and systems for the promotion and encouragement of activity in science and technology. The process seems to have gone forward everywhere and to have prompted an ever faster growth of knowledge.

"Knowledge in the health area is being renewed every nine years. There are more active scientists today than ever before since the beginning of mankind, a circumstance that holds out great possibilities for action and challenges of equal magnitude.

"In every one of our countries--in some faster than in others--transformations are seen to be going forward in their economic, political and social structures. Among those working in the health sector we are also witnessing a growth of awareness of the effort needed to attain the challenging goal of health for all by the year 2000. That challenge has three salient features. One is accelerated population growth and its impact on health coverage. If current demographic forecasts materialize, by the year 2000 we will have to have in place services to meet the basic needs of 290 million human beings--more than the 250 million estimated to have permanent access to those services in Latin America and the Caribbean today. This increase is not only quantitative; the problems are becoming qualitatively more complex and are accompanied by mounting demands. The aging of the population, urbanization, and the socioeconomic changes in progress are also helping to change the structure of the problem and the demands for solutions to them.

"In addition to the inadequacy of the coverage of health services, we also face serious organizational and management problems in maximizing the use of the available resources. The greatest challenge facing us in this area is the waste of more than $10,000 million every year on personal services alone. The main cause of this may be the technological factor: availability and/or ownership, or the adaptation of practices, organization, behavior and resources.

"All this is happening in a setting of the worst economic crisis every to strike at the countries in our Region. I do not want to dwell on the economic aspects of the crisis. Like those of the past, this one has been diagnosed and is being treated with purely economic measures. It is expressed in the accumulated external debt, fiscal imbalances and price increases, insufficient savings and production, and rising unemployment and underemployment. But the origin of the social crisis is to be sought in the principles, the philosophy with which we are 'developing' our countries.

"If the economic growth rates of the seventies held until the end of the century and the development processes in our countries remained unchanged until that date, the number of people living in critical poverty, that is, excluded from the growth process, would rise to over 170 million by the year 2000. What is in crisis, therefore, is not just the current expressions of an economic situation, but the very model of our development, which overlooked the human being and left him on the sidelines. In this setting, the challenges facing us go beyond the conventional limits of what we regard as health. Perhaps the challenge is precisely what to do to fit health properly into the development process itself as an indivisible whole.

"The changes of the last 25 years suggest that we are witnessing a new structural phase in the life of some of our societies. Unfortunately, not all of them can be said to be in this new stage of the social organization process. This stage is characterized by and depends on the generation and circulation of knowledge. If in the past the circulation of merchandise, the generation of goods and services were dominant aspects of social organization, today--and increasingly into the future--our principal 'merchandise' or stock in trade is that immaterial thing known as 'knowledge' or information.

"This analysis is equally valid for health activities and should be applied to them. This was why, at the beginning of my tenure as Director of the Pan American Sanitary Bureau in 1983, I said that the Organization's mission was expressed above all in the management of knowledge, or in the management of the information in which that knowledge is conveyed. This is a complex process that runs from the generation of knowledge to its application in the solution of specific problems. In that perspective, it was and is my intention to impress on the Member Countries and the Secretariat of the Organization the vital importance of scientific and technological work to the accomplishment of our mission of supporting the countries and their Governments in solving the health problems of their populations.

"It must be said that we have come a long way since the establishment of the ACHR. Despite the gains we have made, however, I sense that we are still on the threshold of the real effort that will be required of us if we are to meet the challenge of the present and the demands imposed by the building of the future.

"The solutions of the present are profoundly bound up with the ideas we have and the proposals we make for the future. In the health field we have attained an extraordinary consensus on the general nature, or at least on the basic principles, to be taken into account in building that future to which we aspire. Health for all, and all that is implied in that goal and its principal strategies, is the guidepost that charts our general line of advance in the immediate future. And in this advance, science and technology may be our most important instrument and resource. The future of our countries--and I include here the most developed of them as well--is deeply dependent on our ability to understand and act in the fundamental sectors of science and technology and to use them for building, together with our peoples, the future they deserve.

"Awareness of this need appears to be mounting increasingly in the countries of the Region. This is why many of them have established specific ministries or councils at the ministerial level for the promotion, conduct and coordination of activities for scientific and technological development. There can be no doubt that, though we need not aspire to parity with the most advanced countries, unless we are productive enough in certain fields of knowledge to narrow the gap between the first and third worlds, we will be unable to emerge out of our present state of dependence, poverty and underdevelopment.

"To realize the validity of these assertions we need only consider, for example, the growing importance of information and communications, biology and immunology, energy, and the behavioral and managerial sciences. Also of importance are other more specific fields of scientific activity, such as biotechnology, the computer sciences, information processing, telemetry, microelectronics, quantum mechanics, molecular biology, the different areas of energy, including nuclear energy for peaceful purposes and, in the social sciences, knowledge of the forms of organization and of orientation of social behaviors, etc. In regard to health, I need not tell specialists like yourselves what each of these fields means for the solution of the problems confronting us and those specific to activities in the sector.

"It is, therefore, in the context of this overall situation and specifically of the challenges presented to us by the goal of health for all and of the importance of scientific and technical work for its attainment, that we celebrate today the twenty-fifth year of the Advisory Committee on Health Research.

"The activities through which the Pan American Health Organization cooperates toward the development of science and technology include two that I regard as fundamental: the first is directed at improving the organization of the resources available to us, and at their coordination for more efficient and productive use. This activity, in addition to

affording an immediate response to the scarcity of resources, must be strongly supported by a strategy for the mobilization and use of existing resources in each country and for collaboration among countries. The second is the effort that will have to be made in countries in which science and technology are less developed. In neither case should the developed or the developing countries be animated by individual or exclusively national interests.

"The field of science and technology holds out an extraordinary opportunity for cooperation among the Organization's Member Countries. These opportunities are not yet being fully exploited for many reasons that I will not go into here. They include the loss of a basic principle that should govern comity among men in society, including international society. Perhaps the absence of one of the members of this Committee, referred to by Professor Robbins, is an example of the difficulties that hamper the growth of this mode of cooperation. Political and ideological differences of the moment can even prevent a member of this Committee from being present to participate in discussions and analyses that should be of interest to all at this time.

"The consensus on the value of science and technology that persists in this world so ridden by contradictions and conflicting interests invests this area of research with an unusual potential for making health a channel of understanding, dialogue and cooperation with which to build more just societies that may prosper in peace with justice and liberty.

"I would also like this Twenty-fifth Meeting of the Committee to go forward in an awareness that the conflicts of today's world have created a crisis not only in our governments and societies. The crisis is also making itself felt in pressures on the budgets of all the international organizations. Our own Organization is beginning to feel the effects. I would not want the momentary manifestations of these pressures to be confused and their true causes forgotten. It is true that the economic crisis plaguing the countries in the Region and all over the world is increasing the restrictions on the ability of countries to contribute to the maintenance of the international organizations, including ours, and that in some cases these organizations have not given proof of desirable levels of productivity, effectiveness and efficiency. Beyond these real or supposed manifestations, however, I think that what is being progressively and dangerously lost in the world today is an awareness of the need for international solidarity and of the importance of multilateral cooperation for the surmounting of conflicts and problems in the world.

"As time passes and the sense of guilt for the holocaust of the Second World War fades, governments are losing interest in surrendering those small fragments of national sovereignty that favor the mechanisms of multilateral cooperation. Apart from high-sounding and truly

beautiful speeches about international solidarity and the importance of the international organizations, it is national borders and interests that determine, sometimes with incontestable legitimacy, the cooperative relations among countries and are giving bilateral mechanisms precedence over multilateral ones, whereas they can and should be mutually complementary.

"I do not believe, or at least I do not expect, that humanity will have to go through another holocaust, however limited in extent, as is sometimes thought possible, in order to regain its understanding of the validity of the basic principle of solidarity and comity that must prevail in relations among nations, peoples and societies.

"I am no pessimist. While cognizant of the existing difficulties, I see a world of possibilities if only we can make imaginative and innovative use of them. I would like to repeat what I said to you in Mexico City in 1983 and reiterated in Havana last year. I would like this Committee to really become a permanent instrument of policy in our Organization, and not only in the Pan American Sanitary Bureau--an instrument capable of promoting cooperation among the national institutions of science and technology, among the governments and even among our peoples; and that its work not consist of just annual meetings to draw up recommendations and evaluate the extent to which they have been acted upon. We must establish broad, flexible and effective mechanisms to make this Committee an engine of scientific and technological activity that will further the health and progress of the peoples in the Region. This is a challenge that I once more present for your consideration.

"In closing I want to welcome you to our Organization and to wish you during these five days a meeting of excellent and productive work and an enjoyable stay in this beautiful city of Washington. The Pan American Sanitary Bureau and its personnel will assist you in your work and in solving any personal problem.

"Thank you."

I. WORKING SESSION ON THE ORGANIZATION AND ADMINISTRATION OF RESEARCH IN THE PAN AMERICAN HEALTH ORGANIZATION

1. Progress Report on the PAHO/WHO Grant Program 1984-1985

At its XXIV Meeting held in Havana, Cuba, in July 1985, the Advisory Committee on Health Research agreed that the PAHO/WHO Research Grant Program should be evaluated every two years.

On the same occasion, the Research Coordination Unit prepared a brief report on the changes made in the Grant Program. Because of the brevity of that report, it was felt that the nature of these changes should be set forth in greater detail and a discussion held of the experience gained in the period up to 31 December 1985 (Document PNSP/05/85 and Directive 01-85).

In 1983 the PAHO Directing Council approved the sum of US$1,273,000 for research grants. In the course of 1984 the awarding of grants was temporarily suspended to allow for review of the practice of previous years and to adjust this to the policy on research laid down by the Director, which "shall consist in pointing up the areas of knowledge in which insufficient information is available, this being an obstacle that makes it difficult to find solutions to national health problems, and at the same time in cooperating with member countries so as to carry out, in a coordinated fashion, the research necessary to remedy these deficiencies".[1]

It is relevant to note that in previous years work under the program depended more on the initiative of individual researchers who were aware of the availability of these funds, than on a real and systematic effort by PAHO to promote research on topics of interest for member countries and the Organization.

In this connection, the review of the program was performed with a view to a substantive change in its orientation by giving the PAHO Technical Programs and Country Offices an active role to play in the design, implementation and supervision of research projects.

The review was entrusted to the Internal Advisory Committee on Research (IACR), which produced Document PSNP/05/85 describing the methodology for the determination of priorities and presenting the topics ranked by order of priority and aspects relating to the functioning and administration of the Grant Program.

The Committee submitted its report to the Director in January 1985, and Directive 85-01 setting out the rules for the operation of the program was issued on 21 February. This directive states that "the topics selected, besides promoting a better understanding of the situations in the countries, will convert the program into a means for organizing the health knowledge generated by the research and into an instrument that will further the integration of resources at all levels in PAHO, since the country is the basic unit of study".

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1 Management Strategy for the Optimum Utilization of PAHO/WHO Resources.

The implementation of the process designed to administer the Research Grant Program began in June 1985 when practically all of the inter-program groups had been formed. By July of the same year, five of the eleven groups had prepared development plans and on 1 August the Internal Committee reviewed the first country protocol.

In the meeting of the Internal Committee held on 18 September 1985 the Management urged that the reviewing of the protocols be speeded up and that the Committee be as flexible as possible in methodological aspects, without compromising its responsibility. This suggestion from the Management was prompted by the need to reserve the funds allocated to the program before the end of the year. At this meeting certain administrative aspects of the projects that had not been dealt with in Directive 85-01 were clarified, such as the payment of wages, wage supplements, the hiring of national and international personnel, equipment procurement, etc.

At the same meeting, before ruling on specific projects the Committee made a general review of the proposals received and concluded that the majority of them suffered from methodological and administrative shortcomings. However, in view of the time constraints already noted and in order to support the efforts for research promotion and the encouragement they give to for national researchers, the Committee decided to adopt the following four criteria to guide it in its decision-making:

- Approval without comment: The project is consistent with the development plan prepared by the inter-program group and has no substantive deficiencies in its methodology or administration.

- Approval in principle and funds reserved. The project is relatively well developed but needs improving. The improvements must be documented before the first disbursement is made. This criterion has also been applied in considering applications for support to countries that undertook to carry out research in accordance with a standard protocol and designed by inter-program groups in which a health authority (at the state, provincial, municipal or national level) has been identified as principal researcher. In these cases no disbursements would be made until the country's standard protocol had been received.

- Prepared to approve and commit funds: The project is in accordance with the prioritized list of topics but is insufficiently developed and needs substantive improvements, and must be resubmitted to the committee.

- Rejected: The project does not fit into the prioritized list of topics or the development plan prepared by the inter-program group.

The Committee met for the last time in 1985 on 18 December. By that date it had reviewed 93 projects. of which it approved 77 and rejected 16. Of these, the Director approved the financing of 68 for a total of US$968,319, which came to 78% of the total funds allocated to the Research Grant Program for the two-year period 1984/85. The reason for the lack of data for projects on the "Technology Development Process" is that these were governed by administrative procedures different from those laid down for the Grant Program. However, out of the total Program funds, US$200,000 was allocated for projects in that area.

The new orientation of the Research Grant Program represents a significant shift from the practices traditionally adopted by PAHO in this field. It is being implemented as a process and, in consequence, advances and problems can already be identified in its present phase.

Despite the short time it has been in operation, some results are apparent. Possibly the greatest achievement is the experience gained and the fact that research, always extolled in speeches, is no longer a sporadic and optional activity in PAHO's technical cooperation program but a responsibility shared at all levels. The allocation of funds from the technical programs for implementing projects and the designation of focal points in certain Country Offices and technical programs are concrete proofs of the change in progress.

It is equally important to note that research is today a subject of discussion not only in the technical programs with a long tradition and extensive resources in the field, but also in those which are now embarking on research work even though their resources are limited.

However, some shortcomings are also apparent. These are inherent in the significant changes taking place at the institutional level and are identified with a view to contributing to the refining of the process.

Interprogram coordination and execution of multinational research within the formal organizational structure is no easy undertaking, and is in fact all the more difficult when the institution has little experience and tradition in the execution of integrated projects.

The not very conspicuous part played by the Research Coordination Unit in the monitoring and promotion of the process has not helped to refine and streamline it.

The apparent discrepancies observed in the descriptions of some of the priority topics and the way in which they were developed by the inter-program groups can also be attributed to these deficiencies. This suggests that comparison of the results of the majority of the studies financed on one and the same topic, especially those forming the health situation analysis area, will be difficult or impossible, and that joint analysis of all the topics studies in each country will not "make it possible to arrive at closer approximations to reality" (Document PNSP/05/85).

The inter-program groups that were intended to provide the drive for the new process have operated with great difficulty in the majority of cases, and the coordination between the responsible Technical Programs has not materialized to the expected extent.

The degree of participation of the Country Representatives in the selection of the national research groups has been modest in the best of cases.

With a view to refining the process and overcoming some of its present deficiencies, and considering that this will require a coordinated effort on the part of the different institutional sectors involved, the IACR in its meeting of 20 March 1986 approved the following recommendations:

a) The Research Coordination Unit must play a more active role both in ensuring compliance with the administrative rules laid down in Directive 85-01 and in supporting the technical aspects of the process. It must collaborate in the preparation of development plans and country protocols and in the appraisal of projects prior to submission to the IACR. This recommendation is based on the recognition that, in addition to a supervisory body to issue the basic directives (the IACR), setting the process of change in motion also requires the presence of a coordinating body that is active and flexible enough to carry it through all the stages of its development.

b) The inter-program groups are important examples of intrainstitutional coordination and one of the basic elements of the Grant Program as now conceived, which means that the Program's success will depend to a large extent on how well they do their job. In addition to a more active DRC presence to support the activities of these groups, the IACR considers that it will be vitally important for these groups to perform periodic self-evaluations, which could in principle take the form of annual reports on their activities.

For more effective systematization of the research project analysis and approval process, the IACR has prepared a calendar for the submission and approval of projects and revised the flow chart for their processing. The new flow chart includes various analysis stages for projects, which will make it possible for the IACR to analyze in greater depth projects that meet the basic ethical, technical and administrative requirements.

The schedule approved is as follows:

Submission of Projects to CRs	Submission of Projects to the Programs and DRC	Analysis and Approval by the IACR
January	February/March	March (4th week)
April	May/June	June (3rd week)
July/August	September/October	October (4th week)

To give greater publicity to the PAHO Research Grant Program in the scientific communities of the countries and to facilitate project processing and analysis, together with the establishment of a regular information system regarding the Program, the IACR recommended that, on the basis of the modifications suggested, DRC should prepare information pamphlets on the Program and instructions for the submission of research protocols.

Discussions

One point that was extensively discussed was the distribution of projects among countries, it having been found that most of the projects were being carried out in the countries in which science and technology were most highly developed. The Secretariat said that the reason for this distribution was partly the little time there had been to promote research in the countries and the fact that the rules of the Program required that the selection of countries be made by the inter-program groups charged with development of the priority subjects.

Some members felt that the Program should aim to improve and augment research capabilities in the less developed countries without sacrificing project quality to geographic balance in the awarding of funds.

For the countries of less scientific and technological development, paramount importance was attached to support for consultants in the design of research projects and to training for researchers in drawing up protocols for the purpose of obtaining funds from non-local sources.

Some members attached importance to the efforts made to give the Program a systems approach by linking it with the Organization's operational levels in order to develop an infrastructure that today consists of the Internal Committee and the inter-program groups, and to connect the projects with the Country Offices. They were also of the view that the information provided would facilitate the Committee's evaluating function. It was further pointed out in this connection that the impact of the Program had to be evaluated in relation to its purpose, which is to search for information on subjects in which information is lacking in the Region.

The Secretariat advised that, in future, efforts would be made to publicize the Grant Program more and that the number of project reviews would be increased from once to three times a year.

There was consensus among the members of the Committee that the resources available to the Grant Program were really too limited to justify an information effort, which might generate in the scientific community expectations that would be difficult to fulfill. There was also a consensus that the funds for this Program were very small as a percentage of the Organization's total budget, and that, in addition to seeking ways to optimize their use for accomplishing the purposes of the Program, they should be increased.

2. Research Funds of PAHO/WHO

At the XXIV Meeting of the Advisory Committee on Health Research (ACHR), in Havana, Cuba, the Secretariat was asked to provide this meeting with an update on the Organization's funding of research activities in 1985. This document complies with this request in part, as information is presented for only most regional programs and specialized PAHO Centers. The information could not be obtained on the PAHO Centers of PANAFTOSA, INCAP or CLAP, or from country programs, in time for inclusion in this report.

Financial information on research activities was requested from the regional programs and centers by means of the same questionnaire used to obtain this information for 1984.[2]

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2 Research Funds of the Pan American Health Organization. PAHO/ACHR/24/1.

The questionnaire requested the amounts and source of funding (regular or extrabudgetary) expended or allocated in 1985 for research activities in the following categories:

a) Personnel

- Professional and support staff of the Organization;

- Consultants and advisors to the Organization.

b) Meetings

- Including seminars, workshops, courses, symposia, etc.

c) Supplies and materials.

d) Formal publications.

e) Grants, contracts and personnel service agreements.

For purposes of the questionnaire, research was considered as embracing not only the actual carrying out of or financial support to research projects, but also all activities for research promotion and coordination, advisory services in the formulation and execution of policies, and the design, evaluation and review of programs and projects, research training, etc.

Information was also requested on research-related travel and on the total available budget of the program for all 1985 activities. This figure, for the most part, corresponded to an amount that was one-half that assigned to the 1984-1985 biennium. The aggregate of the research funds in the different categories could then be related to the total funds available to the programs or centers.

Expenditures related to staff costs, if not actually known, were estimated by prorating the budgeted cost of the post to the amount of time devoted to research by that staff member.

The document shows the distribution of funds for regional programs coordinated by PAHO Centers. The data for the Health Technology Development (HSA) program reflect only one component of the program -- the promotion of technology in health services development. They show that 51.3% of the total funds of the regional programs including their associated centers was distributed for personnel costs, followed by 36.1% for grants, contracts and personal services agreements. In comparison, in 1984, personnel accounted for 62.4% and grants for 14.2%. The large percentage increase in grants in 1985 reflects the awarding of $968,319--41% of the total in this category--for 68 projects in the PAHO Research Grant Program.

The document also shows the total funds used for research in PAHO regional programs, incuding the centers that are part of the program, by sources of funds. A total of US$6,531,935 was used by the regional programs for the conduct and coordination of research activities. Of this total, the PAHO Centers used US$1,130,267 (17.3%) which, combined with funds of the regional programs coordinating the centers, accounts for 36.4% of the total research funds for 1985.

Three programs, DRC, HPT, and HPM, accounted for 46.3% of the 1985 total. The percentage of research supported by PAHO regular funds was 73% overall.

The distribution of research funds by categories and sources of fund, respectively, for the PAHO Centers for which data are available shows that CEPIS and CFNI account for 79.6% of all the research funds used by the Centers. Personnel costs accounted for 71% and grants for 16% of that total by category of research activity.

Of a total of US$38,033,654 approved for all purposes by 12 regional programs reporting in 1985, 17.1% was used for research in all activities of the Regular Program, including the associated centers. Altogether, 18.4% of the Regular Funds and 14.4% of the extrabudgetary funds were spent on those programs that year.

In 1984 a total of $8,958,492 was reported for research activities from 13 regional programs, including the associated Centers. This figure is not directly comparable to the $6,531,935 reported for 1985 activities because some programs and centers did not provide in 1985 the information they had provided in 1984. A comparison of the amount of funds used for research in regional programs, including the associated Centers that reported information in both years, indicates that the amount allocated to research increased by $1,274,961, or 24% from the amount allocated in 1984 for the same programs. This would appear to show a continued commitment by the Organization to support research in its technical programs. However, in view of the current budget situation affecting the Organization, this trend may fade out in the next biennium.

This year's survey on the use of funds for research in PAHO was faced with problems similar to those of previous surveys. In 1985 several programs/centers did not report or provided only part of the information they had supplied in 1984. Of the 12 programs responding, almost none did so by the date requested. The data reported on staff costs are estimates of the percentage of time devoted to research, and as such are subject to error. They do provide some useful information, however, and are consistent with expectations of costs in this category.

The Secretariat is striving to improve the accuracy of information obtained and the timeliness of its presentation. Discussions have been initiated with other programs of the Organization toward a search for solutions to this problem and for ways to identify activities that have a research component.

Discussions

Once more the Committee made clear the need to obtain a larger appropriation for the development of science and technology, without which the countries of Latin America and the Caribbean would fall increasingly behind the central countries and become increasingly dependent on the more developed countries in the Region, which would also affect their political independence.

It was said that, unless a way could be found to develop science and technology, the struggle to do so would have serious social and political consequences in the countries of the Hemisphere in addition to bringing out ever more clearly the domination of those who have attained over those who want to have it or are in process of achieving it.

The Secretariat described the financial problems that the Organization would be contending with during 1986-1987 following the reduction of the contribution of the United States of America to the World Health Organization and the reductions anticipated as a result of the drop of oil prices in the Regions's oil-producing countries. It was further indicated that, not only would the Organization's regular funds be reduced, but some of its extrabudgetary resources would contract as well.

A report was heard on the termination of the Collaborating Centers on Cancer and the LACRIP project, financed by the National Institutes of Health of the United States of America.

One of the statements made noted that, even though research was recognized as one of the ways of finding solutions to the health problems of the peoples in the Hemisphere, in times of economic crisis or budget cuts, research suffered more than any other item of expenditure both at the national level and in international organizations such as the OAS and UNESCO.

Another speaker referred to what the Director had said in the inaugural session and dwelt on the Committee's responsibility for the establishment of a research policy not only for the Bureau but for the Organization as a whole, which included the Member Countries, and for the development of broad and flexible mechanisms through which to influence the implementation of this policy in the Hemisphere.

The Committee recognized that the situation described by the Secretariat was not transient, but was indeed growing worse. It was also of the view that the countries of Latin America and the Caribbean would have to join forces and take specific measures to develop a common policy for giving momentum to the development of science and technology, and would reduce dependence and promote the establishment of collective arrangements for the protection of their scientific and technological output.

After the initial discussion that arose on the Organization's financial situation, the Committee directed its attention to the cost of strategic mechanisms for improving the use of their resources allocated for 1986-1987 and to an increase of those resources for the biennium 1988-1989.

The Director joined in the discussion and reported that, despite the crisis, the Organization today now had more funds than it had had in 1984-85 and that the juncture required bold creativity to attract resources just they were being sought for the countries of Central America.

The Director also suggested that the Committee take such measures as it deemed necessary to make its analysis of the budget for 1986-1987 and, on the basis of that analysis, its proposal for 1988-1989. This proposal could be presented in April 1987 to the Committee on Long-Term Planning and then to the Executive Committee and Directing Council in June and September, respectively, of that year.

3. A Study on Research Proposals Made by the Governing Bodies of the Pan American Health Organization, 1942-1984

From its earliest beginnings the Pan American Health Organization (PAHO) has regarded research development as essential to the search for solutions to the priority health problems facing the countries of the Region.

The present paper examines the resolutions of the Governing Bodies of PAHO from 1942 through 1984, in an analytical effort:

a) To identify the frequency and historical trends of the subjects and types of research proposed in the resolutions of PAHO's Governing Bodies during the period considered, and to determine precisely how the Health Research Program influenced those frequencies and trends;

b) To determine the implications contained in the recommendations of those resolutions;

c) To establish which agents were made responsible for the conduct of research in the proposed subjects;

d) To find out what financial arrangements were made to facilitate the implementation of the research recommendations.

In designing the study, account was taken of the need to define in advance the sources from which the information would be taken, the nature of the proposing resolutions, the subjects and types of research, and the implications of the resolutions examined. It was also decided which methodological instruments were needed for a systematic analysis of the information gathered. These definitions are summarized as follows:

Sources of Information

Sources of information included resolutions approved by the Governing Bodies of PAHO from 1942 through 1984 in which recommendations were made for the performance of studies and research in the health field. For the period from 1942 to 1982, the source was a master list of resolutions compiled for a general study of them, from which the resolutions were selected that referred specifically to the advisability of conducting studies and research. This same selection criterion was applied in an ad hoc review of the resolutions approved by the Governing Bodies in 1983 and 1984. When the information in the resolutions selected was not specific enough, the related reference documents were examined.

a) Most of the proposals for research made during the period 1942-1984 issued from the Directing Council (57.7%), followed by the Pan American Sanitary Conference (30.1%) in second place, and with the Executive Committee running a poor third (12.2%).

b) About half of the proposals for research were in the areas of communicable diseases (30.2%) and the planning/administration of health services (21.2%), while the remaining 48.6% were divided among problems in the areas of chronic diseases, nutrition, environmental health, maternal and child health, other health programs, material resources and other subjects.

   The resolutions promoted by the Health Research Program placed more emphasis than those for other programs and matters, on the areas of the planning and administration of services, maternal and child health, and environmental health, and gave less weight to studies of communicable diseases, material resources and other health programs.

c) The number of research proposals made by the Governing Bodies of PAHO increased six times between the forties and the eighties. Since its inception during the sixties the Health Research Program has exerted a substantial and growing influence on that historical trend. During the period considered, the sharpest increase occurred in the area of the planning and administration of services, (in which the number of proposals increased nine times), and the smallest in that of communicable diseases (three times).

d) The types of research recommended were, in decreasing order of frequency, statistical/epidemiological, administrative, biomedical, socioeconomic, and on resources. This ranking varied with the subject area because, while studies of statistical/epidemiological aspects were greatly recommended for the areas of chronic diseases and maternal and child health, this priority went to the administrative approach in the areas of the planning/administration of services and material resources, and to biomedical aspects in the areas of communicable diseases and nutrition.

It is also noted that the socioeconomic aspect was studied with a considerably higher frequency in research on the planning/administration of services and chronic diseases than in the other areas. Moreover, it is striking under the Research Program that the approaches most frequently emphasized were the socioeconomic and biomedical (44.8%), while in resolutions promoted by other programs and matters, priority went to the statistical/epidemiological and administrative aspects (46.7%).

e) In the great majority of cases (86.8%) it was stated that the proposed research was to be conducted or supported by PAHO, its Member Countries, or the two together, and in the remainder of the cases the recommendation was confined to indicating the advisability of promoting, coordinating and giving importance to those studies. However, in only little more than one third of the cases in which PAHO was designated as the agency responsible for the conduct of or support to the research, specific financing was allocated either from the regular budget or from available extrabudgetary funds.

Discussions

During the discussion there was praise for the initiative of making the study, and it was suggested that it should be continued to determine the extent to which the Governing Bodies' recommendations on research generated real action by the Organization--including the allocation of resources--in this area.

On the score of the sources of these resolutions, the part played by the Governing Bodies and the Technical Programs in generating them was noted, and it was suggested that the best structured programs contribute to the generation of the most resolutions.

There were expressions of interest in a similar study being done of the ACHR's decisions on the assumption that the Committee's had a relatively small impact on PAHO research activities.

4. Methodology Proposal for Evaluation of the Research Component in PAHO/WHO Technical Programs

Evaluation of PAHO/WHO's current technical cooperation activities, which is essential for planning them on a sound basis, is a need that is recognized and clearly stated in various resolutions and recommendations of the Organization's Governing Bodies, and measures are being initiated by the Organization to set up a regular process for evaluating its activities.

In this document the Office of Research Coordination (DRC) presents to the Advisory Committee on Health Research (ACHR) a proposal for evaluation of the research component of PAHO's technical programs. The Office of Research Coordination attaches special importance to the evaluation of this component which implements the core element of PAHO's mission--the very essence of its technical cooperation--which is the management of knowledge. The management of knowledge is understood as the sum of the actions to promote its generation, critical renewal, compilation, and dissemination, and collaboration with other countries to use it more efficiently.

The ACHR has built up a fund of experience in evaluation work: in its annual meetings it studies the research promoted and conducted by some of the Organization's programs. Grounded in this experience and with a view to improving it, the following proposal would institutionalize a regular and objective evaluation process. This process includes the establishment of methodologies and instruments for monitoring and evaluating the development of the research component of the technical programs and Regional Centers, their performance of joint comparative studies, the observation of their historical development, the identification of trends, and the formulation of predictions.

In the opening stage of this process an attempt will be made to identify existing resources and the characteristics of the Organization's research activities, viewed in their broadest sense as the management of knowledge. In subsequent stages the evaluation process must be improved by including data on and indicators of the impact of those activities on the generation and use of knowledge in the health field in the Americas.

In its opening phase, the research component of PAHO technical programs and regional Centers will be evaluated for the following purposes:

a) To describe the Organization's activities in health research;

b) To identify the Organization's human, material, and financial resources involved in research activities;

c) To study the content of and consistency between explicit and implicit policies regarding the research component in PAHO Technical Programs and Regional Centers;

d) To study the problems and difficulties encountered in the design and conduct of PAHO research activities and propose appropriate solutions;

e) To study the mechanisms for articulation of technical programs and regional Centers with national institutions concerned with health research;

f) To identify researchers and research groups and institutions that maintain cooperative relations with PAHO in the field of health research;

g) To study the problems involved in the administration of PAHO research projects and programs in the regional Centers.

The research component in PAHO programs and regional Centers is evaluated in annual surveys of operations during the previous budget biennium. Close to half of the technical programs and regional Centers will be studied during each year, so that the evaluation of the immediately preceding period will be completed in two years. For example, the activities of the biennium 1984-1985 will be studied in 1986 and 1987; those in the biennium 1986-1987 in 1988 and 1989, and so on. The first survey, to be made in 1986, will evaluate the research activities carried out in 1984-1985 by the HPE, HPT, HSM, HSC, HPA, and HCE Programs, and the associated ECO, CEPIS, BIREME, and CAREC regional Centers. The survey for the biennium 1984-1985 will be done in 1987.

The data will be collected from basic Program documents[3] on two specialized questionnaires, one on the Technical Programs and the other on the regional Centers. The questionnaires will be sent to the Programs and Centers and be answered by their chiefs.

When this information has been obtained, two members of ACHR will pay a visit to each Program and its associated Center or Centers and meet with their executive heads in order to clarify and supplement the replies and discuss the information provided, particularly with regard to questions requiring more detailed replies. This activity will be carried out between July and December. The corresponding data and studies--the latter to be done by DRC--will be presented in the ACHR meeting the following year.

Discussions

During the discussion, suggestions were made for the composition of the group that would make the evaluation, the responsibilities for preparation of the reports and study of results, duration of visits, etc.

II. WORKING SESSION ON SUBJECTS AND TRENDS OF HEALTH RESEARCH

1. Medical Research Issues and University Linkages in Canada

Health research in Canada is supported from the following sources: the Medical Research Council, 50%; other Federal government sources,

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[3] Research priorities, AMPES, and annual activities reports.

principally the National Health Research Development Program (NHRDP) of the Department of National Health and Welfare, 7%; voluntary agencies, 24%; provincial governments, 17%; and foreign agencies, 2%.

The Medical Research Council of Canada (MRC) is a Crown Corporation established by Parliament in 1969 to promote, assist and undertake basic, applied and clinical research in Canada in the health sciences and to advise the Minister of National Health and Welfare about health research. The MRC reports to Parliament through the Minister of National Health and Welfare. The Council has a full-time President, who is also the Chief Executive Officer, and 21 other members representing the scientific and lay community. There are an Executive Committee, standing committees to assist the Council in formulating policies and procedures for ethics in experimentation, priorities and planning, public affairs, research funding and research personnel, and some 35 committees made up of scientists who review applications for research projects and personnel support. A Secretariat located in Ottawa provides general services to the Council and all of its committees.

The MRC has no laboratories of its own. Its responsibilities are to support research and research training in health sciences in universities, affiliated hospitals and institutes. The investigators supported by the MRC are on the staff of schools of medicine, dentistry, pharmacy and veterinary medicine and in other health science departments or schools such as psychology and nursing. The research supported by the MRC involves study of the structure, function and environment of man and other organisms in health and disease. The Council also supports clinical trials of the efficacy and effectiveness of measures of potential value for the prevention, diagnosis and treatment of disease. Finally, the MRC will consider projects on methods of education of health professionals and on the history of health sciences.

The Council has Grant Programs and Salary Support Programs. Under the former are Operating Grants which support research activities by individuals working alone or in collaboration with others; Major Equipment Grants; and Maintenance Grants for the operating support and maintenance of facilities shared by several investigators within an institution or region. Other grants include those for MRC Groups which are considered to be centers of excellence for research and training in what are deemed to be especially important and productive areas; Program Grants which support a program involving closely integrated research activities carried out by three or more investigators; Development Grants which provide special support to schools where the level of research activity needs to be enhanced; Subject Research Development Grants to stimulate research in specific areas; Biotechnology Research Development Grants to encourage research on the application of this technology to health problems; and General Research Grants to Deans of Medical, Dental, Pharmacy and Veterinary Schools for the promotion of research.

The Personnel Support Programs include the Salary Support and Research Training Programs. Within the former there is support for highly qualified scientists at different stages of their careers: the scholarship program, which provides five years of support to allow those who have recently completed their formal research training an opportunity to demonstrate an ability to carry out independent research; the Scientist program, which gives five years of support to exceptional candidates who have had four to eight years of experience as independent investigators in university positions; and the Research Associate program, which enables institutions to recruit outstanding senior investigators.

The Research Training Programs offer support to highly qualified candidates seeking research training in the health sciences: Fellowships for those with an M.D., D.D.S., D.V.M. or Ph.D. degree, and Studentships for those undertaking training leading to an M.Sc. or Ph.D. degree. The Council also offers Undergraduate Research Scholarships to encourage an interest in research among undergraduates in Canadian schools of medicine, dentistry and pharmacy.

A number of important issues and challenges are presently being explored by appropriate committees of the Council. These include the establishment of Special Research Institutes and Units in various parts of the country with support from both government and industry; the development of a program in Tropical Disease Research to be carried out both in Canada and in developing countries with joint support from the MRC and Canadian international agencies such as the International Development Research Center (IDRC) and the Canadian International Development Agency (CIDA); the fostering of clinical investigation including that done by nurses; and the preparation of a major revision of the 1978 document on Ethics in Experimentation by the MRC Standing Committee for this area.

2. Primary Care Research in Isolated and Remote Communities of Canada

Canada is regarded as a developed country. However, Canada's north has many similarities to the developing world and, therefore, several problems of delivery of primary health care to remote and isolated communities.

Canada is a federal state made up of a central federal government, and ten provincial and two territorial governments. Responsibility for health care is shared among the different levels of government. However, the responsibility for health care delivery rests mainly with the provincial governments. The exception is health care delivery to Indian people, especially in the norther parts of the provinces and to Inuit and other residents of the Yukon and Northwest Territories. At the present time the health of these people remains the responsibility of the federal government. They total some 350,000 out of a national population of 25 million. Through the medicare system, treatment services are available

to the vast majority of Canadians. However if one takes the broad definition of primary health care to include not only first-level treatment, but also health promotion, prevention of illness and the other components of primary health care mentioned earlier, then the level and form of delivery is more variable between provinces and between different regions of the country.

This paper discusses chiefly the provision by the Federal Government of primary health care services in remote areas of northern Canada and the lines of research being developed. It also describes the present components of the primary health care delivery system and the community-level programs carried on under the health policy for the aboriginal population, whose goal is "to achieve an increasing level of health in Indian and Inuit communities, generated and maintained by the communities themselves." The cornerstone of the policy is community development and participation by Indian and Inuit people in the provision of health services. In many areas the system is integrated, with hospitals acting as bases for a primary health care outreach program to remote communities. In a typical remote community, a range of Primary Health Care services will be delivered by nurse practitioners working in a nursing station, assisted by paramedical personnel and a doctor from the base hospital or related medical school, who pays occasional visits.

There is a strong movement by Indian and Inuit people towards community control of local resources, including those relating to health care delivery.

It was within this context that, in early 1985, a research and development program was set up. The first steps were to consult with staff of the department, the staff of the medical schools providing services to the North and representatives of the Indian and Inuit people. As a result of these discussions, a series of priorities was developed for research in primary health care and divided into four groups: specific medical or health issues, community-based research projects, self-determination and transfer issues, and health operations and health services delivery research. Examples of projects in each of these groups follow:

The first group--specific medical and health issues--covers research on vaccines against Haemophilus influenzae (the cause of a high incidence of meningitis), the establishment of an oral rehydration therapy program, a reassessment of the use of BCG vaccine in the tuberculosis program, the work of preparing hepatitis B vaccine, and several environmental problems, such as the health effects of methyl mercury and polychlorinated biphenyls (PCBs) being found in the fish and sea mammals that are the food sources of populations in isolated communities. It may be emphasized that many of these research projects require inputs from government, universities, communities, clientele, and research institutions.

In the second group of priorities--community-based research projects--a vital component is community participation, input and involvement. Another essential requirement is feedback from researchers to the community. There needs to be a sense of ownership, by the community, of the work to be done, and an ongoing dialogue between the community members and the researchers. With isolated populations, because of their relatively small numbers, statistics and statistical trends may appear to be affected by one or two additional cases, and it is very easy for a community to develop research fatigue if it is repeatedly subjected to research activities.

My third research category, involving self-determination and the transfer issues of responsibility for health care problems to local authorities, is a very significant area in Canada at the present time. Mention is made of the previous research grouping. The ultimate participation of a community in research for its health own care is the acceptance of control of, and responsibility for, that care. I mentioned previously the transfer on Baffin Island, and successful transfers in northern Quebec and the Northwest Territories, but elsewhere the transfer process is still in the developmental phase. A great deal of work remains to be done in this area, ranging from assessments of needs at the community level to research into post-transfer support of health care systems.

In the fourth group, health operations and health services delivery research includes health situation analysis, technological development, accessibility of health services, lifestyle modification, training of paramedical and other health workers, and development of health communication systems.

Some specific examples are mentioned, including the analysis of local health needs under the National Native Alcohol and Drug Abuse Program, and the training of primary health care nurse practitioners and community health representatives, who are of the local communities themselves. Also mentioned is the need for research and development work under those programs, such as that being done by the Schools and Program of Dental Therapy, which have been so successful.

These research projects address aspects of most of the eight essential elements of primary health care cited in the Declaration of Alma-Ata. The hope was expressed that it would be possible to have an ongoing exchange of findings with those from research in other member countries of PAHO.

3. Health Research Issues and Trends in the United States of America

The National Institutes of Health (NIH) provide the major support for biomedical research in this country, and it is important to sort out past, current and future directions.

NIH is a bit older than then ACHR: in 1987, it will be celebrating its 100th anniversary. Like PAHO, which had its centennial in 1981, NIH was created to deal with infectious diseases. Hence, from its beginning, NIH has been addressing not only health problems of the U.S. public, but indirectly those of people worldwide. It still holds uppermost in mind the support of basic research which will be applied to advance the health of populations throughout the world.

Since its designation as the NIH in 1948, there has been exponential growth in knowledge and understanding of the biomedical and behavioral processes affecting health and disease, unlike that ever known in the history of American science. In addition to the conduct and support of biomedical research into the causes, prevention, and treatment of diseases, NIH also supports research training and the development of research resources, and makes use of modern methods to assess research results and communicate findings.

Through the years, the NIH research budget has been a matter of major importance to the U.S. Congress--as well as to the national and international scientific community. In fiscal 1986 the NIH budget is $5.6 billion, of which about 80% supports investigators in universities and research institutions throughout the world. These NIH extramural awards are the keystone of our national medical research effort, and we are dependent on the voluntary submission by scientists of new research ideas. Currently, over 20,000 investigator-initiated research grants are being funded in the United States and more than 200 in other countries. The NIH intramural research program (i.e., that conducted in the NIH facilities themselves) receives about 20% of the research budget. Since 1950, foreign scientists have played an important role in intramural research as participants in the NIH Visiting Program, constituting over half of NIH's intramural professional staff.

The international activities of the NIH are specifically authorized under the International Health Research Act of 1960 (P.L. 86-610) to "advance the status of the health sciences in the United States and thereby the health of the American people through cooperative endeavors with other countries in health research and research training...." The benefits of these cooperative programs, however, extend far beyond the U.S. borders. The Fogarty Center was established in 1968 as the NIH focal point for international research and is the only NIH component with an explicit international mission, which includes NIH-wide coordination of activities relevant to this mission.

Basic research is the necessary prerequisite for new technology to advance health. For the better part of the century, U.S. investments in biomedical research have produced a revolution in new knowledge of biology and its application to the prevention and treatment of disease.

Because of the NIH's major role in supporting health research, its program priorities have exerted considerable influence on the direction of research trends in the U.S. as a whole. The health problems we address, therefore, reflect those of the entire country, and possibly the global community.

In recent years some significant trends and actual changes in management and funding of biomedical research have emerged. These include:

- Increasing congressional control of the NIH and the programs devoted to biomedical research, accompanied by a declining emphasis on the development of a unified national health research policy;

- Burgeoning numbers of special interest groups that have a stake in biomedical research through projects for which each seeks funds and recognition;

- A leveling off of funding for biomedical research in constant dollars;

- A decline in the number and roles of physicians in biomedical research, and in the number of young people being attracted to the biomedical sciences;

- Acceleration of the clinical application of research findings through clinical trials and other activities in technology assessment and transfer; and

- Increased concern about the overall maintenance of the health research establishment.

There are at least three issues of concern in relation to progress in health research. These are the direction and support of health research, funding levels and research progress, and needs for strengthening health research infrastructure.

The direction and support of health research in the U.S. is driven by multiple and divergent domestic and foreign policies, decisions and public reactions. Depending on your predisposition, you might say there is no health research policy, there is an unarticulated health research policy, or there are diverse health research policies. The federal budget process illustrates this phenomenon.

The international components of NIH programs are particularly influenced by this phenomenon. The worldwide recession and the subsequent downward pressure on national expenditures generally results

in priorities to meet domestic over international needs. Over the last decade, international activities have constituted no more than 1.5 percent of the NIH budget. In fiscal 1985, $66 million of the NIH's total appropriation of $5.1 billion was devoted to international activities. Of the $66 million, about half was expended as research awards or contracts to foreign investigators. About $27.5 million supported scientist exchanges: foreign scientists conducting collaborative research in the United States and U.S. scientists conducting research abroad. The remainder supported international conferences, travel and activities under bilateral agreements.

In fiscal 1985, NIH supported research under 53 bilateral agreements involving 31 countries. Other mechanisms of the NIH involve a far greater distribution of scientists from the Region through research grants and contracts, participation in meetings and other scientific exchanges.

Funding levels and research progress at the NIH have led to the grappling of problems posed by an essentially zero rate of growth. A new philosophy has emerged, perhaps best expounded by the well-known U.S. philanthropist, Mary Lasker, who has stressed the need to "cash in" on the the research achievements of the last 20 years. The assessment and transfer of research results to clinical practice has become an important part of NIH business over the past decade. NIH is the single largest supporter of clinical trials in the United States of America.

Funding is only one component in the formula for research productivity and progress. Other factors include individual creativity and opportunities for collaboration.

Strengthening the Research Infrastructure. Since the mid-1970s, and in response to zero-based budgets, health science leaders have been concerned about the overall maintenance of the health research establishment--including human resources, research facilities and equipment. In a recent presentation on biomedical research directions for the 21st century, for example, NIH highlighted the crucial need to strengthen the research infrastructure. Obsolence of equipment and deterioration of facilities at research institutes make it difficult to attract and retain new talent, and erosion over the last decade has retarded progress perhaps even more than a no-growth budget.

Health research presents many opportunities to advance the goal of HFA/2000, a target date that is not far off. Even though in the United States of America there are multiple determinants which serve as driving forces for health research, and even though funding has remained constant, nonetheless there is accelerated knowledge on the causes of disease and tremendous breakthroughs in new technologies to be applied in the prevention, control and treatment of major health problems. High priority must be given to the task of strengthening the research infrastructure to continue moving forward. Policymakers at legislative levels in the United States of America--and in all countries--must be aware that international cooperation is of special importance as one of the most cost-effective ways to meet the goal of HFA/2000.

Discussions

The essentially informative character of the presentations prompted question-and-answer periods rather than discussions.

The members of the Committee thanked the speakers for the inforamtion provided.

In addition to the presentation scheduled under Section II, the members of the Committee joined with scientists of the National Institutes of Health in a panel discussion in which they examined the most advanced research going forward in different areas of biomedical research, such as immunology and the development of vaccines, with emphasis on tropical diseases and communicable diseases including AIDS, maternal and child health, health of adults (the aging process, cardiovascular diseases, cancer and neuroscience), health and behavioral research, and maintenance of the biomedical instrumentarium.

III. WORKING SESSION ON THE RESEARCH COMPONENT OF THREE MAJOR SUBREGIONAL TECHNICAL COOPERATION INITIATIVES OF PAHO/WHO

1. Application and Generation of Knowledge in the Health Initiative of Central America

The essence of PAHO's technical cooperation with its Member Countries is the management of knowledge.[4] This means the critical review and use of existing knowledge in the conduct of PAHO's technical cooperation programs and in the identification of areas in which knowledge is insufficient in order to promote and support new studies and research.

The present summary attempts a preliminary description of the generation and use of studies associated with development of the Health Initiative of the countries in the Central American isthmus.

Based on the principles of the Contadora Group and with support from PAHO, the Health Ministers of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama approved a plan for development of the health sector[5] and signed the Declaration of San José in March 1984 as a commitment to joint action for the solution of health problems common to all of these countries. Seven priority areas were selected:

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4 PAHO. Estrategia de Gestión para la Utilización Optima de los Recursos de la OPS/OMS en Apoyo Directo de los Países Miembros, 1983. Misión, p.5

5 PAHO. Basic Document "Necesidades Prioritarias de Salud en Centroamérica y Panamá", 1984. 64 pages.

Health Services
Manpower Development
Essential Drugs
Food and Nutrition
Tropical Diseases
Child Survival
Water and Sanitation

Central American professionals, specialists in these areas, drew up preliminary projects detailing the activities to be carried out over a five-year period, and worked out the cost estimates for each of those projects.[6] Copies of the projects were submitted for consideration by external cooperation ministries in developed countries and multilateral and bilateral agencies.[7]

The following table sums up the initial situation of the Plan:

PROJECTS IN PRIORITY AREAS AND ESTIMATED LOCAL AND EXTERNAL COSTS
(In thousands of dollars)

Priority Area	No. of Projects	Local Funds	External Funds
Health Services	35	80,494.9	357,477.5
Manpower Development	31	36,562.3	96,826.1
Essential Drugs	31	38,398.3	91,734.7
Tropical Diseases	28	76,362.6	104,780.5
Food and Nutrition	53	46,141.7	112,413.2
Child Survival	36	49,897.5	50,646.5
Water and Sanitation	83	194,701.5	601,935.1
Total	297	522,558.8	1,415,813.6

A plan on this scale needs a large volume of information and the results of earlier studies for its organization, design, planning and execution. To simplify, the information used was classified under the headings of political, epidemiological, economic/financial and technical/scientific analysis.

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6 PAHO. Status of the Plan's Development--Report to the Madrid Conference, November 1985. 22 pages.

7 PAHO. "Necesidades Prioritarias de Salud en Centroamérica y Panamá." Documento preparado para la Reunión Interagencial, 1984.

The existing information and knowledge allowed the Plan to be developed to the stated level of detail. In the course of its organization, needs for new knowledge were identified, which at this point may be summed up a follows:

A) General: The need to mobilize human and financial resources for development of the Plan necessitates a more precise study of the technical and scientific institutions and capabilities of the countries.

a) The study published by PAHO in 1982 on research in the health field in eleven Latin American countries"[8] provided an analysis of research in the health field in different countries, including those of Central America (excepting Belize). That study gave an operational definition of a Researcher as "a person who participates in at least two stages of one or more research projects, one stage being the stating of the problem and formulation of purposes and hypotheses, and the other analysis of the results."

RESEARCHERS IN THE COUNTRIES OF CENTRAL AMERICA AND PANAMA (1981)

Country	Researchers	Researchers per 100,000 Inhabitants
Costa Rica	83	3.78
Panama	52	2.76
Nicaragua	57	2.15
El Salvador	50	1.07
Guatemala	73	1.03
Honduras	25	0.70
TOTAL	340	---

These data were compared with the number of authors publishing during the same period, according to the Institute for Scientific Information. This institute monitors the authors of the different nationalities in approximately 2,000 journals in the field of the natural sciences, technologies and social sciences.

8 García, J.C., "La Investigación en el Campo de la Salud en Once Países de la América Latina", PAHO, 1982. 118 pages.

SCIENTIFIC AUTHORS IN CENTRAL AMERICA AND PANAMA (1981)[9]

Country	Authors	Authors per 100,000 inhabitants
Costa Rica	187	8.52
Panama	144	7.65
Nicaragua	9	0.34
El Salvador	36	0.77
Guatemala	217	3.07
Honduras	35	0.98
Total	340	---

The same study[10] identified 534 research projects that were classified as basic, applied and developmental. This internationally accepted classification corresponds to the technical division of modern scientific labor.[11] Basic research is that directed at the generation of knowledge which serves as input to other research. Applied research is that oriented toward the production of potentially useful knowledge, and developmental research is that conducted for the purpose of producing knowledge ready for use and incorporation into the innovation process, or for putting knowledge into practice.

PROJECTS BY TYPE OF RESEARCH AND COUNTRY

	Type of Research			
Country	Basic %	Applied %	Developmental %	Combination %
Costa Rica	19	65	10	6
El Salvador	24	61	7	8
Guatemala	10	86	1	0
Honduras	11	72	11	6
Nicaragua	0	86	14	0
Panama	21	53	14	12

9 Institute for Scientific Information, 1981.

10 García, J.C. La Investigación en el Campo de la Salud en Once Países de la América Latina (OPS), 1982. 118 pages.

11 OAS. Departamento de Asuntos Científicos. "Compilación de Datos Científico-Tecnológicos en América Latina." Washington, D.C., 1972.

An effort is now in progress to update the information on scientific capabilities in the area and to promote its growing participation in the development of the countries. Difficulties of articulation between universities and research institutes, on the one hand, and political authorities, on the other hand, have in the recent past limited greater use of existing capabilities. Implementation of the Health Initiative has brought out the importance of research and the need for having a scientific contingent to support the conduct of activities.

b) Setting priorities in public health measures has always been a source of discussion between scientists and health administrators. In designing the Health Plan of Central America and Panama, a careful analysis was made and permitted the framing of criteria that were adopted by the local professionals for classification of the different projects.[12]

Applying these criteria to the original projects resulted in the following subdivision (November 1985):

Priority Area	No. of projects*	High Priority	Medium Priority	Low Priority
Health Services	35	25	4	2
Manpower Development	32	12	9	6
Essential Drugs	30	11	6	8
Tropical Diseases	23	10	6	1
Food and Nutrition	46	18	17	9
Child Survival	35	18	12	4
Water and Sanitation	77	29	30	13
Total	278**	123	84	43

* Includes subregional projects all of high priority.

** During the revision process, some projects were subdivided, others merged into single projects, and others canceled.

12 PAHO. Informe de la Reunión de Coordinadores Nacionales del Plan de Necesidades Prioritarias de Salud en Centroamérica y Panamá, junio de 1985. Criterios de Prioridad, p. 8. 58 pages.

c) The design of new projects for which external financing is being sought also has financial implications inside a country, either because of the recurring costs implied by the project or, in the case of loans, because of the indebtedness they give rise to. A general study of the financial capabilities of the health sector was done with the collaboration of the central planning agencies of the several Central American countries.[13]

d) A special study of needs and capabilities for technical cooperation among the countries of Central America and Panama (TCDC) was recommended by Resolution XI of the Meeting of Health Ministers of that Subregion.[14] That study is in progress under the responsibility of the Ministry of Health of Guatemala and with PAHO support.

B) Specific: Specific research projects were identified in each priority area.

a) Health Services: Several studies have been proposed and are in progress with PAHO support:[15]

- A study of the service system and the financing of health services (Panama);

- A study of the common information system in the development of the SNUS (Nicaragua);

- Sectoral planning and manpower development for the health services (Costa Rica);

- A common system for the supply and co-management of services (Honduras);

- A study of joint investment planning (Guatemala).

In addition to these special studies, others in the areas of the maintenance of equipment and physical installations, local operating capacity, etc., are under discussion along with specific projects.

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13 Suarez, Rubén. Financiamiento del Sector Salud en Centroamérica y Panamá, 1985.

14 RESSCAP/1/85. I Reunión del Sector Salud de Centroamérica y Panamá. Resolución XI. August 1985.

15 RESSCAP/1/85. I Reunión del Sector Salud de Centroamérica y Panamá. Resolución XII - Proceso de Coordinación Sectorial. August 1985.

b) Manpower: In this priority area several subjects of studies have been identified, among them a detailed and ongoing inventorying of installed manpower training capabilities, manpower planning, etc., and the organizing of the information and documentation centers needed to support teaching and research. These activities are carried on with the direct support of the Subregional Health Training Program (PASCAP), headquartered in Costa Rica.

c) Essential Drugs. Several preliminary studies have provided a situational diagnosis of this priority area in regard to the consumption, distribution and procurement of drugs used in the Central American area. A study is in progress toward the organizing of a system for joint procurement, quality control and drug production in the area.

d) Food and Nutrition. In this priority area the Institute of Nutrition of Central America and Panama (INCAP) has done a number of important, high-quality studies, and has supported the performance of further studies on food and nutritional surveillance, food fortification, increasing the availability of foods in the community, and other subjects.

e) Tropical Diseases: Activities in this priority area concentrate particularly on the control of malaria and *Aedes aegypti*. For the conduct of those programs, new stratification strategies will be tested by the countries. There are projects in execution that are financing collaborative research in this area. Hence, a careful revision must be made of epidemiological aspects of malaria, such as existing pockets of the disease, vectors and resistance to insecticides, and characteristics of the parasites and resistance to treatment. Other projects are of specific interest to some countries (leishmaniasis, Chagas' disease, etc.)

f) Child Survival: While a series of technologies is available for immediate action in this priority area, several studies have been proposed and are in progress in the areas of maternal and child health, control of diarrheas, acute respiratory infections, risks at birth, growth and development, etc.

g) Water and Environmental Sanitation: Large-scale investments are in progress in this priority area, to which the Inter-American Development Bank (IDB) is making sizable contributions. Special studies have been made for the design of these projects: research on sources of supply for drinking water, a study on the production and marketing of chemicals and equipment commonly used in drinking water supply and sanitation systems, etc.

C) The Health Initiative as Innovative Research: The Plan on Priority Health Needs of Central America and Panama is a research project and experiment in itself. Its purpose is to improve the health of the Central American populations, and its primary assumption is that it is possible for health measures to contribute to the establishment of peace, so desired and so necessary, in this subregion of the American Hemisphere. At the same time, it proposes a methodology for the establishment of priority action points, activities coordination, intra- and intersectoral articulation, and coordination of cooperation agencies and of PAHO's own technical cooperation. In other words, it is a study of the application of a new management strategy adopted by PAHO and its Governing Bodies.

Constructive results are anticipated not only in these experimental aspects, but also--and fundamentally--to attainment of the highest goal, which is social and health development in a setting of peace, understanding and solidarity on the Central American isthmus.

Discussion

There were some who, while acknowledging the importance and exceptional merits of the Plan, were pessimistic about the attainment of peace in the subregion and felt that the magnitude of the external aggressions, not only those of a military nature but also those directed at weakening efforts at peace and unification of the Central American countries, was such as to augur no favorable outcome in the immediate future.

The Committee firmly endorsed the idea of health as a bridge to peace and solidarity among peoples, the efforts of the Contadora Group, and the Organization's initiative, which it described as a historical undertaking that redeemed the weakened credibility of the international agencies.

In regard to the research component, the Committee was of the view that the situation brought it to the fore as a corollary to the plan's priorities, and that the orientation should be toward applied research to favor a rapid search for solutions to critical current problems. Some put the scientific knowledge and energies of their institutions at the Organization's disposal to help make the program a reality.

2. PAHO/CARICOM Caribbean Initiative

The Director of the Pan American Sanitary Bureau announced to the Conference of Ministers Responsible for Health--one of CARICOM's institutions--his intention of presenting a special initiative for the Caribbean. It was clear from the beginning that this would be a joint

effort between PAHO and CARICOM. The announcement was enthusiastically received by the Ministers and, later, at the meeting of the PAHO Directing Council in September 1985 the outlines and content of the initiative were formally accepted.[16]

The initiative is organized around six priority areas: environmental protection, including vector control; manpower development; control of chronic diseases and accident prevention; and maternal and child health, including population issues. The priority areas have been selected on the basis of the health profile of the area and because they represent strategic entry points through which the subregion as a whole can mobilize and make the most productive use of resources in order to strengthen the whole delivery system and improve health status.

The initiative will involve the English-speaking Caribbean countries and territories: Antigua and Barbuda, Anguilla, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Saint Lucia, St. Vincent and the Grenadines, St. Kitts-Nevis, Trinidad and Tobago, and Turks and Caicos Islands.

The primary purpose of this initiative is to assist the Governments of the Caribbean in improving the health of their peoples.

The specific purposes are:

a) To identify priority strategic areas and use them as entry points for facilitating the more productive use of resources and for promoting TCDC;

b) To develop specific projects as vehicles for improving the health delivery system as a whole and at the same time making gains against the more critical problems in the health sector;

c) To improve technical cooperation in health in the Caribbean by stimulating collaboration among countries, agencies, and institutions;

d) To mobilize local and external resources to address the most important problems of the neediest groups and sectors.

Following is a description of the basic purposes and possible research components of the strategies to be followed. These research strategies are set out in very general terms and are sometimes implicit in the general purposes rather than described as separate activities:

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16 Caribbean Cooperation in Health, 1985. Document prepared by PAHO and CARICOM and presented to the Ministers Responsible for Health in the Caribbean.

Environmental Health and Vector Control

The general purposes are:

a) to develop national capabilities for the development and maintenance of efforts for the improvement of environmental conditions;

b) to reduce the incidence of sewage-borne diseases;

c) to satisfy the basic human needs of communities and sanitation;

d) to safeguard the environment from pollution and degradation.

The main areas to be addressed are water and sanitation, sewerage, and excreta and solid waste disposal.

The research problems may include:

- Detection and control of leaks;

- Studies on water quality and usable appropriate technologies;

- Community participation in solid waste management;

- Development of appropriate technology for waste water disposal.

Vector control is included in this area.

The research problems may include:

- Monitoring of vector resistance/susceptibility;

- Effects of pesticide use;

- Operational research on program organization.

Health Manpower Development

The general purposes in this area are:

a) To promote the revision and formulation of policies and plans for health manpower training, utilization and research in the context of the managerial process for national health development;

b) To establish subregional cooperative arrangements for the preparation of a leadership cadre, especially in community health management; for the development of an appropriate educational methodology and technology, and for health manpower research;

c) To develop schemes and mechanisms to ensure optimal use of trained health personnel;

d) To plan and develop in each country a system of continuing education for, among other purposes, enhancing multidisciplinary performance in solving the priority problems of communities;

e) To strengthen the existing infrastructure at universities and other educational and training institutions, to enable them to discharge properly their national and subregional responsibilities.

The research may address problems in:

- Health manpower training and utilization;

- Educational methods;

- Manpower planning, and policy formulation in this field.

Chronic Diseases and Accidents

The purposes in this area are:

a) To attain a better understanding and clearer definition of the situation in the Caribbean countries in regard to chronic noncommunicable diseases and accident-related disorders;

b) To develop integrated community-based control programs and organize diagnostic, therapeutic and rehabilitation services for these disorders;

c) To reduce the frequency and impact of traffic accidents or minimize their public health consequences.

The research problems may include:

- The promotion and support of a comprehensive analysis of existing information on morbidity, mortality and determinants of hypertension, diabetes and coronary diseases, and cancers of the cervix, breast and lung;

- The identification, and collaboration in the implementation and use, of resources and mechanisms for data collection and analysis;

- Encouragement of and support to the identification and validation of causal associations between diseases, persons and ecological variables;

- Securing the appropriate collection and dissemination of biomedical information in the area of chronic noncommunicable diseases;

- Making a study of the cost of traffic injuries to health services in order to provide decision-makers with data that justify financial support for preventive measures, and encouraging a review of emergency care systems;

- Making a study of current practices in the medical assessment of drivers and providing guidelines for the Caribbean in the light of epidemiological studies.

Strengthening of Health Systems

The purposes in this area are:

a) To strengthen the managerial capacity of the health sector in order to ensure that health systems are efficient, effective, and productive;

b) To improve the coverage and quality of the delivery of health services through the strengthening of national and intercountry networks;

c) To develop effective mechanisms for facilitating community participation in health and health-related matters.

The research problems may include:

- Promotion of health services research in subregional and national institutions;

- Studies of alternative arrangements for the financing of health services;

- Studies on health technologies appropriate for the different levels of care.

Food and Nutrition

The general purposes in this area are:

a) To implement the Caribbean food and nutrition strategies as conceived and revised;

b) To assign priority actions to the food components of those strategies and especially to macro policies that have an effect on the household;

c) More specifically, to promote the development of appropriate manpower and information systems that can become a basis for effective food and nutrition surveillance.

The research problems may include:

- Development of national nutrition surveillance systems;
- Studies of household food consumption;
- Studies of food safety in the household;
- Anemia, its frequency and causes.

Maternal and Child Health and Population

The general purposes in this area are:

a) To reduce the number of births, especially to teenage mothers.

b) To improve the status of perinatal care, and thereby reduce

i) the incidence of prematurity;
ii) the incidence of low-birthweight infants;
iii) neonatal morbidity and mortality;
iv) the incidence of maternal morbidity.

c) To maintain immunization coverage at not less than 90% for the target groups.

d) i) To reduce the incidence and severity of diarrheal diseases;

ii) To reduce morbidity and mortality from acute respiratory infections.

e) i) To reduce the incidence of handicaps in children;

ii) To improve the health and well-being of the mentally and physically handicapped.

The research problems may include:

- Sociological studies of teenage pregnancies;
- Studies on causes and sequelae of low birthweight;
- Operational research on application of standards in diarrheal diseases and acute respiratory infections.

It has not been possible to compile the literature on all or most of the research being done in the Caribbean. Fortunately, however, most of the health-related research is presented at the annual scientific meetings of the Commonwealth Caribbean Medical Research Council. The

development of this Council and data on papers presented from its inception in 1956 down to 1976 have been reviewed previously.[17] One of the striking findings of this review was the contribution of the University of the West Indies to the promotion of research. It was also evident that there had been a steady shift away from infectious diseases and accounts of isolated cases or problems, to more organized research that considered a whole range of clinical problems.

To determine whether research was being done in the six priority areas of the initiative, an analysis was made of the abstracts and papers presented in the last six meetings of the aforementioned Council (1980-1985).[18] The distribution among the different areas reveals a predominance of papers in "other" areas. However, it was encouraging that the largest number of the remaining papers was in the area of maternal and child health, including family planning, followed by those on chronic diseases. No papers were presented in the area of human resources development. This may be because there was little research in this field or because the findings of such studies as there were had been presented and discussed as internal documents in teaching institutions. Studies have been done on manpower planning by the University of the West Indies and a few on health personnel, but very few of these have resulted in formal presentations.

Despite the importance of health services and their development, research in this area has been minimal, with only one researcher continuously engaged in studies and reporting his findings. Environmental health has also been poorly served.

The papers were divided between those concerned with infectious and noninfectious problems, and the ratio of the two groups was found to be 1:3. As in the previous review, the majority of papers came from the University of the West Indies, but there was always a steady stream of contributions from government workers. The various non-university specialized units also contributed--particularly the Medical Research Council Unit and Caribbean Epidemiology Center. There were also occasional contributions from the Caribbean Food and Nutrition Unit. Outside of PAHO Centers, six researchers received PAHO grants for their work.

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17 Alleyne, G.A.O., and Wren, M. 1976. A History of the Commonwealth Caribbean Medical Research Council 1956-1976. Publication of the Research Council.

18 Proceedings of the Commonwealth Caribbean Research Council 25th, 27th, 28th, 29th and 30th Annual Meetings held in 1980, 1981, 1982, 1983, 1984 and 1985.

ABSTRACTS OF THE SCIENTIFIC MEETINGS OF THE CCMRC 1980-1985

Year	Priority Area						
	Chronic Diseases	MCH	Environ. Health	Food and Nutrition	Health Services	Human Resources	Other
1980	12	13	2	6	1	0	26
1981	14	15	0	3	1	0	28
1982	6	19	0	6	1	0	35
1983	7	15	0	2	1	0	38
1984	2	18	1	7	6	0	25
1985	13	12	0	3	6	0	25
Total	54	92	3	27	16	0	177

The above analysis shows that many of the priority areas appear to be poorly represented in the subregion's research. A first step would be to examine other sources of data to determine if, for example, the paucity of research on health manpower is real. If examination of other data confirm these findings, it will be appropriate to consider how PAHO could stimulate research in these specific areas. The fact that a considerable amount of research is being done in other areas indicates that there is no lack of researchers.[19] Although it is hazardous to extrapolate from Jamaica to the whole Caribbean area, a study on the productivity of scientists in Jamaica over a four-year period showed that on the basis of a ratio of authors of scientific publications to population, Jamaica was second only to Singapore among the developing countries.[20] Also, when a list of the authors from 30 Latin American countries was compiled in 1975, Brazil ranked first with 1,047 authors, and Jamaica a respectable eighth, with 64.[21] What has to be done is to attract these researchers to the underserved areas. There are several ways of doing this, but this is a matter that the Committee might wish to discuss in order to advise the Director on how to proceed.

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19 Alleyne G.A.O. (1980) Medical Research in the Caribbean. West Ind. Med. J. 29: 3-14.

20 Lalor G.C. (1980) The Productivity of Jamaican Scientists. Jamaica Journal, 44: 52-59.

21 Szmant H.H. (1978) Foreign Aid Support of Science and Economic Growth. Science, 199: 1173-1176.

Discussion

Dr. Robbins reported to the members of the Committee on his participation in the Workshop on Health Services Research held at Port-of-Spain, Trinidad and Tobago, during the inaugural session of the XXXI Meeting of the Commonwealth Caribbean Medical Research Council in that city.

He referred to the excellent contribution made by PAHO and its consultants and said that he had been struck by the fact that most of the participants in the Workshop had been nurses and professionals in other disciplines, and that physicians were either not present or were uninterested in this field. He also touched on the Workshop's practical approach, which he regarded as most recommendable, as it allowed the participants to work on concrete problems of their everyday occupational situation.

Regarding the Meeting of the Commonwealth Caribbean Medical Research Council itself, both Dr. Robbins, who attended on behalf of the Director of PAHO/WHO, and Dr. Laidlaw, who was present as the representative of the Medical Research Council of Canada, expressed satisfaction with the high level of the research papers presented and the firm, enthusiastic resolve of the participants to persist in the pursuit of health research. They were amazed at the quality and number of the papers presented by the scientific community of the English-speaking Caribbean despite the serious economic constraints under which it labored.

Dr. Robbins was concerned about the opinion prevailing among those present at both meetings that the Organization belonged to Spanish- and Portuguese-speaking America rather than to the English-speaking Caribbean.

The speaker said that this perception sprang from cultural and historical roots. He also blamed it in part on the fact that only eight years ago PAHO had been a fairly strong presence in the Caribbean, but that this situation was being changed by, among other factors, the joint initiative with CARICOM that was the subject of his presentation.

In addition to these political aspects, the discussion dwelt on the lack of research on health services, which the speaker put down to the relative novelty of the discipline not just in the Caribbean but in more developed countries as well.

3. Joint Plan of Action for the Andean Region

Most of the Latin American countries are currently experiencing their worst socioeconomic recession in 50 years. In 1980 the growth of the gross national product began to decline for the region as a whole, and in some countries the situation was even worse. After growing 5.1% in 1980, it plummeted to a negative 1% in 1982 and to -3.3% in 1983, and this trend is continuing.

The crisis has produced a decline in per cápita GNP and a worsening of living conditions especially for the middle and lower middle classes and for the least favored strata of society. The result has been the marginalization of a greater number of citizens and diminished access to essential goods and services such as education, food, health and housing.

It is in this spirit that the Pan American Health Organization, in the last few years, has opted to focus its efforts on a subregional approach in order to reduce duplications, maximize available resources and provide a synergetic fulcrum for dialogue and coordination among countries.

The first attempt to deal with coordinated efforts at a subregional level was made in the countries of Central America and Panama. The experience gained has clearly demonstrated the merits of such an approach and the results to date have been richly rewarding in terms of increased support to the countries themselves from a multitude of donors who are attracted by common threads and initiatives in several countries at once, and at the same time has allowed the Organization to promote--and to apply within itself--a more rational use of the human and other resources at its disposal. Encouraged by the success of the subregional initiative in Central America and Panama, the Director has proceeded in a similar vein in the Caribbean, and is beginning this year the initial steps toward a Joint Plan of Action for the Andean Group, which includes Bolivia, Colombia, Ecuador, Peru, and Venezuela.

Health research in the countries of the Andean Region varies tremendously in its quantity and quality, as is to be expected. Some of the countries--Venezuela and Colombia--are in the forefront of health research in Latin America, but all of them have established formal mechanisms to encourage and support health research within their borders. Following is a brief review of each.

Venezuela

In the Ministry of Health and Social Welfare there is the Institute of Scientific Research (IVIV) whose purposes are basic and applied research in the areas of biological, medical, and physical sciences. It serves as a training center as well as a consultative body on health research. The priorities established are: 1) the socioeconomic aspects of health services administration; 2) infectious and parasitic diseases; 3) cancer; 4) maternal and child health and family planning; and 5) pharmacology and toxicology.

Ecuador

Until recently there was no national policy on technology and research in the health field, chiefly because of the absence of a national body that could assume that responsibility. Hence, health research was undertaken by many groups with individual and specific

interests and no coordination whatever. This is still the case to some extent but, with the recently established Institute for Nutritional and Medico-social Research in the Ministry of Public Health, the situation is improving. The priorities are to promote research into the biological and environmental causes of the diseases of highest incidence, and the study of human nutrition in all its aspects. Priority is also given to epidemiological studies and health services research.

Bolivia

There is a long-term National Health Research Project. Its main purpose is to establish a first approximation to the epidemiological profiles in the different regions of the country and among the different socioeconomic strata of the population. This entails an analysis of the social and economic dynamics and its influence on population groups on the basis of data compiled since 1952. The overall approach to health research is to consider man in his biological and social aspects so that the data can be studied along these two axes.

In the medical area, research addresses the causal bioecological relationships of health-disease processes.

In the social-medical area, the socioeconomic relationships within the health-disease process are studied.

In the areas of applied technology, research is concerned with the significance of technology as part of the supply and demand factor in the health sector and its implications for the delivery of services, administration, etc.

Peru

In general, there is no clear definition of health research policy. There is great fragmentation among the institutions that do research in this field, resulting in duplication of research and poor use of scarce resources. The largest amount of health research has been carried out by the universities and within the Ministry of Health, although in recent years they have been joined by some private institutions.

There is a National Council for Science and Technology (CONCYTEC) which has responsibility for developing a national policy in science and technology, and the promotion, financing, and coordination of research. The structure of CONCYTEC includes a Directorate for Health Research. Within the health sector there is a National Institute for Health responsible for the formulation and coordination of scientific work in the sector.

Colombia

Coordination of research in the health sector is the responsibility of the Research Unit in the Ministry of Health, but is actually quite weak. Research is also undertaken by COLCIENCIAS, ASCOFAME and the universities, but none of these agencies knows much about what the others are doing. Operational (applied) research is done at Valle, Antioquia and Javeriana Universities and in private institutes.

In reviewing the priority areas in their respective health sectors, the Ministers of Health of the five countries, together with the Director of the Pan American Sanitary Bureau, defined in December 1985 eight areas in which joint activities could be carried out with the Secretariat of the Hipólito Unanue Agreement. These eight areas will serve as a basis for the joint program of work betwen that Secretariat and the Organization in 1986 and beyond, and as the core of the subregional Joint Plan of Action for the Andean Countries.

The eight priority areas are as follows (in no particular order of importance, since this order may vary in each country):

a) Control of vector-borne diseases;

b) Production, control and use of drugs;

c) Health manpower development;

d) Health services and appropriate technology;

e) Strengthening and modernization of the organizational, administrative, and planning infrastructures of health services;

f) Drug dependency and related problems;

g) Food protection;

h) Health measures in disaster preparedness.

The following are possible areas of research within the priorities identified by the Ministers of Health:

Tropical Diseases

- Socioepidemiology of the problem
- Immunology, diagnosis, research and treatment
- Control of vector-borne diseases
- Operational research

Essential Drugs

- Production
- Control
- Use

Health Services

- Relationship between health systems and society
- Needs and demands of the population
- Production and distribution of resources
- Delivery of services
- Management of health services
- Economic analysis, costs
- Program evaluation
- Community participation

Drug Dependence

- Methods for measuring the problem
- Health problems
- Behavioral characteristics
- Social and economic costs

Food Protection

- Risk factors in food preparation
- Waste and its causes
- Economic costs

Disaster Preparedness

- Analysis of risk factors
- Contingency management
- Disease control and sanitation

Human Resources

- Needs of the health system
- Characteristics of the education system
- Relationship between health and the education system
- Use of human resources
- Methodological aspects

Discussions

Although the speaker had said that the Andean Area initiative was barely starting, the Committee was of the view that the proposed plan was not only accurate in its perception of needs in the subregion, but well designed in its working approaches.

At the end of the session Dr. Robbins gave the floor to Dr. Guerra de Macedo, who discussed the three initiatives from a broader standpoint and stressed their importance for the development of research in the Hemisphere.

The Director emphasized the opportunity offered by the initiatives for the development of collaborative research projects on subjects of interest to the countries in the three subregions and others with the same needs or gaps of knowledge.

Dr. Guerra de Macedo closed the session with a reaffirmation of his faith in health as an instrument for dialogue, understanding and cooperation for the building of societies that are more just and can live in peace.

IV. ORGANIZATION OF SCIENCE AND TECHNOLOGY IN THE HEALTH FIELD

1. Health Research in the University

In response to a proposal to promote broader participation by the university in efforts to attain the goal of HFA-2000, presented to last year's meeting of the Advisory Committee on Health Research, this Committee suggested that a study be made of the status of health research in the universities of the Region.

As a prelude to this study, the available information was reviewed, and enough documentation covering the last four years was found to make a preliminary characterization of the present situation.

A. A preliminary view is afforded by the study done by Dr. Juan César García,[22] who in 1982 reviewed 3,338 health research projects in 11 countries of the Region. He found that 73% of them were concentrated in Chile, Colombia and Peru, and the remaining 27% were spread among Bolivia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua and Panama. Most of the projects were carried out in universities (63%) and many of the remaining studies were conducted in other public agencies (32%), leaving a very small number of projects (5%) conducted by establishments outside both institutional settings.

University research remains predominant whichever the field, as can be seen from the following table:

	Basic	Clinical	Public Health
University	73%	56%	53%
Governmental	22%	40%	39%
Other	5%	4%	8%

22 García, Juan César, La Investigación en el Campo de la Salud en Once Países de Sur América, PAHO, Washington, D.C., 1982 (Ref. RD/21/2).

It was found that 44% of the professionals conducting that research were physicians, 8% chemists and biologists, 6% dentists, and 4% microbiologists, veterinarians and biochemists. Of the professionals not connected specifically with the health area, 3% were social scientists, 3% engineers, and 1% educators.

B. In Mexico, which was not covered by the study in question,[23] Dr. Daniel López Acuña recently made, with PAHO support, a survey of a sample of 128 institutions, of which 28 were attached to universities.

The proportions of the scientific research in each field found to be conducted in a university setting were as follows:

Research Field	% Conducted in Universities
Biomedical	48
Clinical	27
Public health	25
Management of knowledge	40
Technological development	45

This research resulted in the following proportions for the Organization's program categories:

Health Services Infrastructure		26%
Health systems development	10%	
Manpower development	16%	
Health Promotion and Development		40%
Health Protection and Promotion		22%
Environmental Sanitation		6%
Technology, Diagnosis and Treatment. . . .		6%
Total		100%

These findings not only convey the importance of the university's contribution to the conduct of health research, but also bring out an order of priorities that reflects academic interest in the promotion of basic and biomedical research rather than research in connection with public health.

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23 López Acuña, D., Inventario Nacional Sobre Capacidades de Cooperación Técnica en Salud entre Países en Desarrollo, PAHO, Mexico City, 1985.

Particularly in the field of health systems development, to which pertain most of the priorities of the "University and Health for All" program, the research effort has been very limited so far, accounting for about 10% of the projects found.

C. Lastly, it has been possible to study the rankings of the countries that have made the greatest research effort in a specific area. This was done by considering the distribution of projects financed throughout the Region by WHO's Program of Research in Tropical Diseases (TRD),[24] which in 1984 and 1985 awarded US$4,678,679 in the Americas.

Projects approved in universities in the United States of America (37%), Brazil (18%), Cuba (9%), Colombia (8%), Chile (7.5%), and Argentina (5%) add up to 84% of all projects carried out, the remaining 26% being distributed among Bolivia, Canada, Costa Rica, the Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Panama, Peru and Venezuela.

The share of the universities in the TDR projects approved in each country brought out the great predominance of academic research, as shown in the following table:

Research Projects Carried out in Universities as % of Total Approved in the Country

Cuba	100
Chile	100
USA	88
Peru	88
Canada	87
Colombia	70
Brazil	55
Venezuela	46
Argentina	35
Others	51
Average	68

These findings confirmed the university's potential for generating knowledge in the health area, but at the same time bring out two limiting factors, the first being that this effort is confined essentially to

24 UNDP/BM/PAHO, "Perfil de la Región de las Américas"--Special Program for Research and Training in Tropical Diseases (TDR), 1985.

university divisions concerned with the health professions, and the second that it is confined almost exclusively to the traditional fields of biomedical and epidemiological research.

Because of the funding limitations imposed by the economic crisis, as yet only incipient efforts are being made to integrate into an interdisciplinary context the social, economic and political aspects in which other departments of the university can contribute to the solution of major problems confronting the health sector in its drive toward the goal of HFA-2000.

With recognition of this situation and at the recommendation of the ACHR, provision has been made in the present budgetary year for extension of the inquiry to cover the countries less studied in previous efforts, and to focus on the more developed universities, and in them on departments not directly concerned with the health sector.

Initially, selected universities in Argentina and Brazil will be visited, to be followed in a second stage by those in Chile, Colombia and Peru, and finally a return to Mexico, the scene of the most recent study, whose coverage we would endeavor to expand.

In these countries we will try to obtain information in the universities themselves, and from the national research councils of the health ministries and social security institutions.

This study will not only provide better guidance in the acquisition of knowledge of the situation, but also help to promote a more meaningful effort in research for health development.

Discussion

During the presentation the question was raised of how to study in greater depth the research being done in universities, and how to encourage health services research. Some members of the Committee felt that universities respond to requests received, but otherwise continue with their regular lines of resarch according to the interest of the researchers, without any clearly defined planning. Accounts were presented of some experiences of integrated research among medical schools and health service institutions in Mexico, Uruguay and Brazil at the undergraduate and graduate levels, but without any clear continuity.

It was said that current political and social developments made it practically imperative on universities to become permanent participants in social activities. It was unacceptable that so little use should be made of their research capabilities, particularly in the areas of social medicine and health services. There was also discussion of the role of the university hospital, which in most universities is a center for care

and research at the tertiary level, and is virtually divorced from medical care services at the primary and secondary levels. It was proposed that a clearer definition was needed of the role of the university in the different societies existing in the Region.

2. Report of the Ad Hoc Group on Research Policies and Strategies for the Region towards the Goal of HFA/2000

At the request of the PAHO Advisory Committee on Health Research (ACHR), PAHO convened an Ad Hoc Study Group on Health Research to recommend priorities, activities and strategies for health research relevant to achieving the goal of health for all by the year 2000 (HFA/2000) in the Region of the Americas. The members of the Study Group were selected with a view to the representation of as many countries in the Region of the Americas as possible so as to foster an interdisciplinary approach in the development of health research strategies. The Study Group consisted of nine senior researchers working in the fields of public health, social medicine, epidemiology, administration, health economics, political science, anthropology, sociology, pharmacology, tropical diseases, and science and technology. The countries represented were Argentina, Brazil, Canada, Colombia, Cuba, Jamaica, Mexico, United States of America, and Venezuela. The group met for five days (28 October-1 November) at Harpers Ferry, West Virginia.

The need for the Study Group arose when the ACHR undertook a review of a WHO document, "Health Research Strategy for HFA/2000." This report had been prepared for the Global ACMR to assist Regional Committees in adopting health research strategies applicable to Regional needs for the attainment of HFA/2000. The ACHR found the conceptual orientation of the WHO document to be suitable for the Region in its acceptance of multicausal determinants (e.g., genetic, biological, sociocultural, political and economic) of the incidence and distribution of diseases and the effect of remedial action (that is, of activities in the health field).

The Advisory Committee asked the Study Group to review the WHO document along with several key reports from the Region in order to:

- Identify health research needs in light of the specific characteristics of the Region;

- Recommend priorities for health research (long- medium- and short-term) to alleviate disease problems in the Region;

- Recommend promotion, operation and training activities (long- medium- and short-term) required to support health research in the Region; and

- Formulate Regional strategies for the establishment of health research priorities, and promote the effective conduct of research and application of research findings for HFA/2000.

The Study Group began its work operating on the premise that health research strategies must be examined in the context of policies developed to support HFA/2000 in the Region and in Member Countries. The position taken by the Study Group was that each country, on the basis of its unique characteristics, must consider the extent to which general and specific health research recommendations in this report are applicable to the solution of its health problems.

The Study Group agreed with the conceptual approach in the WHO document, i.e., that health is affected by multiple processes, which must be addressed in order to enhance the health of individuals, families and communities. It was also agreed that viewing health as the product of complex biosocial and environmental forces would assist health researchers in developing models and methods that incorporate sociocultural, economic and political issues along with traditional biomedical concerns.

The Study Group found the document helpful in updating health research by articulating needs for a holistic approach to increase the understanding of determinants of health.

The Study Group identified several major needs to be considered in taking decisions for the development and strengthening of health research strategies to support HFA/2000 in the Region. Basically, these needs are for well-articulated policies and mechanisms to guide strategies for the establishment and conduct of health research; information to establish the nature and distribution of health problems; a conceptual framework to address the dynamic interactions among determinants of disease and health problems; well-trained researchers supported by an infrastructure and material resources that enable sound planning and implementation of health research; health service capabilities to transfer research results to appropriate health care delivery practices; and research to determine the effectiveness of the health service system in responding to changing health needs.

It is the Study Group's contention that research cannot be improvised. Research should be viewed as a continuous activity and a major tool in the education and training of specialists in the health sciences and related fields. Research of all types must be supported by countries of the Region according to their particular needs in solving national health problems. There appears, however, to be a need to instill an understanding of the value of health research throughout the Region, i.e., to develop a "research culture" to support research education and training, research programs and projects and the dissemination of research findings to the public. A research culture implies shared values, customs, norms and practices which guide institutions and individuals in the planning and performance of research, as well as in the application of research findings to improve national health.

The Study Group favored a regional effort that would encourage countries to develop national health research policies, to identify or strengthen at least one national focal point as the responsible structure or organization to develop and implement such policies, and to assure the presence of a budget to support health research. Such national bodies should also be responsible for the promotion and coordination of health research. They should stimulate communication between research organizations within and without the country and be responsible for the dissemination of research findings.

The Study Group was in accord with the definition of research strategy in the WHO document: "...strategy at the highest level (is an) assessment of what needs to be done rather than the means by which it can be done. But...if accepted, the conclusions need to be developed at what may be called tactical and operational levels."

The Study Group also considered a strategic plan of action for health research to be an outgrowth of a decision-making process that establishes national health research priorities. Its purpose is to guide the conduct and application of research results. A strategic plan helps in the development of objectives and the determination of what must be done over the short, medium and long-term to meet requirements for undertaking health research. It was considered that the tactics or means by which strategies could be implemented would differ from country to country and that tactics therefore should be developed to meet country-specific needs.

Given the need to consider disease causality from a broad perspective, the Study Group gave special attention to issues related to the effectiveness of current indicators in defining the nature and distribution of health problems. It was agreed that morbidity and mortality statistics generally do not provide sufficient explanatory data on causality when disease and health problems are viewed as outcomes of biosocial and environmental phenomena. It was also agreed that, while available morbidity and mortality data in the Region reflect the reality of health outcomes associate with unequal distribution of health in the population, such data in and of itself cannot define causality. The Study group concluded that those health indicators and the methods for the compilation and analysis of data would have to be improved, and new indicators devised that would accurately describe the many causes of diseases in the Region.

The Study Group gave considerable attention to approaches for the development of health research policies, priorities and strategies. Figure 1 presents the Study Group's conceptual approach to developing targeted research on determinants of specific health problems within the Region. This approach assumes that specific health problems arise from the interrelationships between four major sets of causal elements:

components in the physical, cultural, and social environments; biological components of populations at risk; health behaviors in populations at risk; and components of the health services system. All elements function within the context of cultural, social, economic and political processes.

Figure 1 is based on the variables discussed as determinants of health in the WHO document. It permits research questions to proceed from either the macro or micro level of concern and is amenable to quantitative and qualitative analysis. Both types of analyses appear necessary to obtain a comprehensive statement of disease causality.

Table 1 presents the current health status indicators used to define health problems, as well as several health indicators that go beyond those in current use. Further research, as noted earlier, is necessary to establish not only new indicators for the rates of mortality, morbidity, and disability in use today, but also positive indicators of wellness rates (e.g., physical, emotional and social well-being).

Table 2 presents a variety of research priorities of concern in the Region in relation to the four sets of determinants of health described in Figure 1. In some cases there is an overlap between research items in each of the components of the model, which illustrates the need for interdisciplinary research and innovative research methods. For example, research on health determinants related to health service systems is amenable to epidemiological methods and analyses.

Table 3 shows an approach for determining research priorities.

The Study Group presented for the Advisory Committee's consideration an integrated conceptual framework as a decision-making tool for the setting of health research priorities at the Regional and national levels in the context of overall health planning (Figure 2).

This framework recognizes that support to health research is dependent on political processes in the Region, and that political will and an ongoing commitment are required if health research is to be included in overall health policy.

Discussion

Several speakers supported the initiative, the design of methodologies for scientific planning being a felt need in the countries to permit the development and improvement of their machinery for the coordination of scientific work in the health field. However, there was some criticism of the methodology proposed in the document for the determination of research priorities. Some felt that the model for analysis of the determinants of health problems was reductive because it did not take account of the complexity of the influences at work in the health-disease process.

FIGURE 1.

CONCEPTUAL RESEARCH APPROACH ON DETERMINANTS
IN SPECIFIC HEALTH PROBLEMS

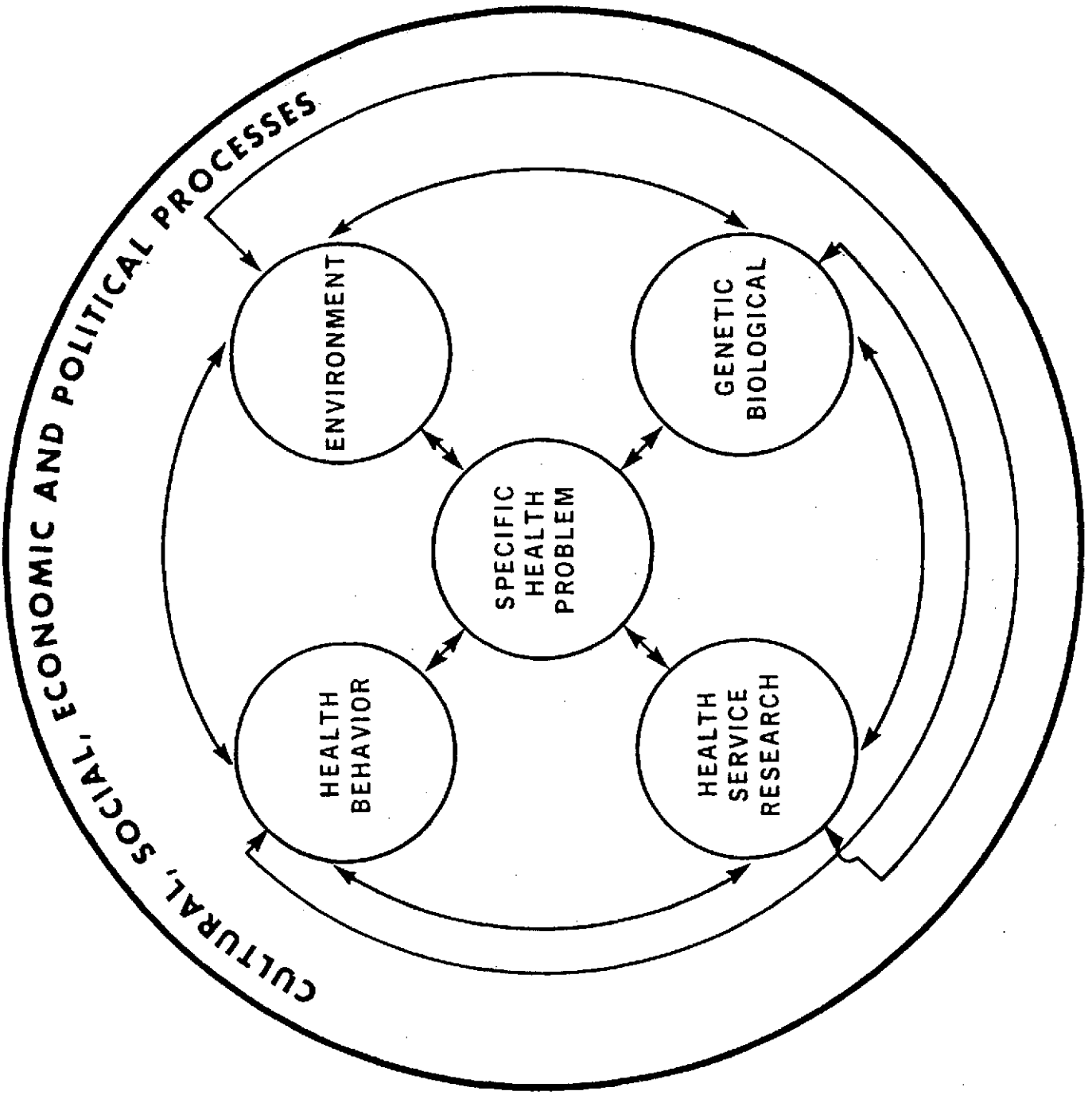

Figure 2. CONCEPTUAL FRAMEWORK FOR ESTABLISHING HEALTH RESEARCH PRIORITIES

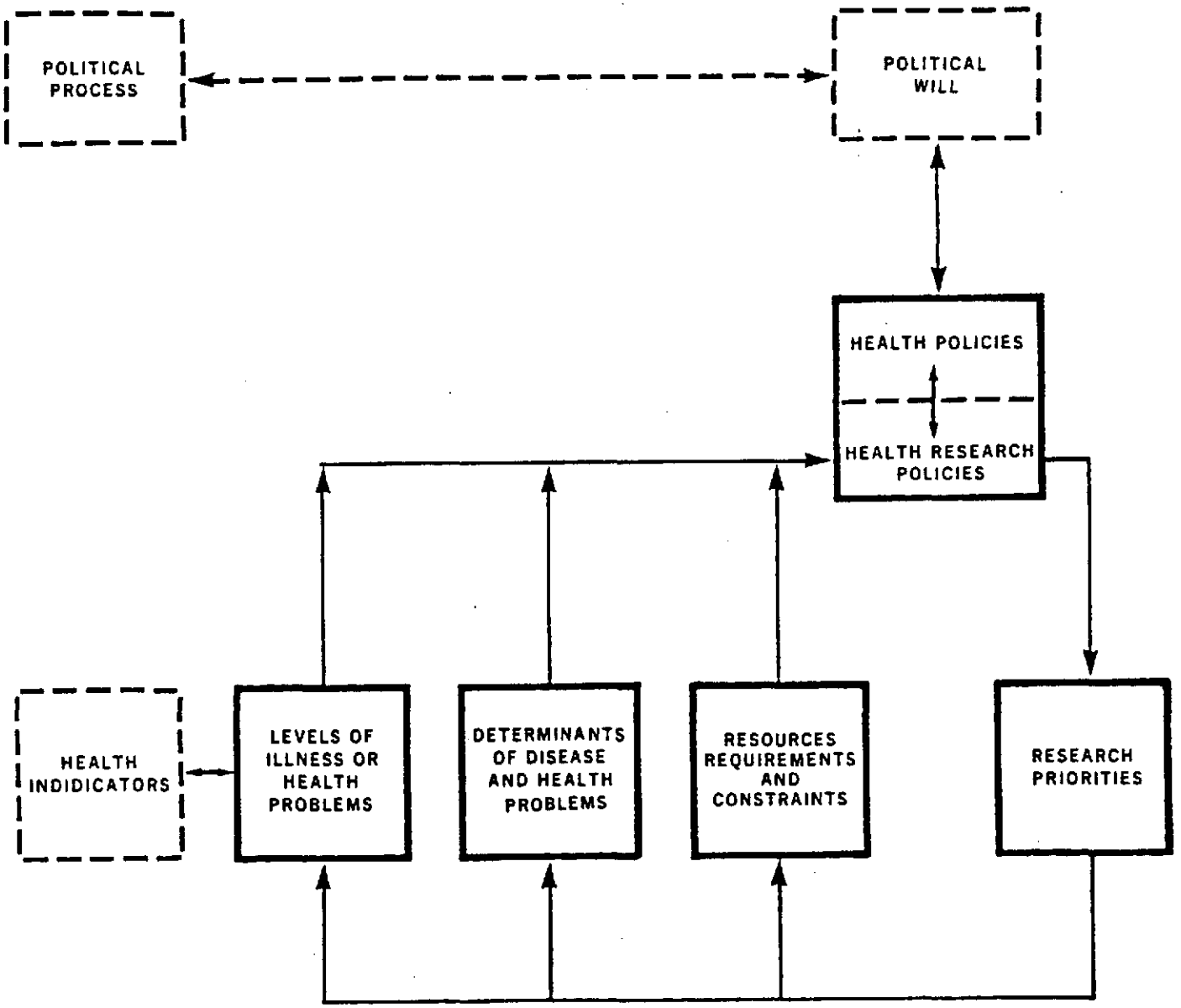

TABLE 1

HEALTH STATUS INDICATORS AND HEALTH PROBLEMS REQUIRING RESEARCH

Health Status Indicators	Health Problems
- Statistics on mortality, morbidity and disability	- Maternal and child health (e.g., family planning, perinatal problems, teenage pregnancy and child development)
- Mortality and morbidity for avoidable or preventable diseases	- Women's health
- Positive Health Index	- Immunization status (e.g., tuberculosis, diphtheria, measles, polio, tetanus, and whooping cough)
	- Diarrheal diseases
	- Acute respiratory diseases (e.g., pneumonia and bronchitis)
	- Malnutrition
	- Sexually-transmitted diseases
	- Accidents (home, work and environment)
	- Occupational diseases and workers' health (e.g., pneumoconiosis, stress diseases and cancer)
	- Environmental health (e.g., water, chemical, air and noise pollution and drinking water supply)
	- Parasitic diseases (e.g., malaria, Chagas' diseases, leishmaniasis, schistosomiasis and filariasis)
	- Urban yellow fever, dengue and other hemmorrhagic fevers
	- Zoonoses
	- Dental health
	- Cardiovascular degenerative diseases and cancer
	- Chronic respiratory disease (e.g., tuberculosis, bronchitis and pneumoconiosis)
	- Diseases and added risks of the elderly
	- Physical impairments (e.g., blindness, deafness and paraplegia)
	- Mental health (e.g., stress, depression, suicide, drug abuse, alcoholism and violence)
	- Neurological diseases

TABLE 2

EXAMPLES OF RESEARCH PRIORITIES RELATED TO DETERMINANTS

Health Services Systems	Health Behavior	Environment	Biological and Genetic Factors
- Policy formulation (implementation)	- Self-care practices	- Economic crisis and health conditions	- Rapid diagnostic tests on genetic factors inducing anomalies
- International comparisons	- Compliance	- Changes in basic consumption (nutrition, housing, transportation, etc.)	- External mutagenic factors (drugs, chemical agents, radiation)
- Intersectorial linkages	- Predisposing, enabling and reinforcing health behaviors	- Changes in working conditions - unemployment - child work - womens work in absence of social services - changes at the work place . decrease in protection . new technology . reorganization and intensification of work	- External factors influencing intrauterine life (bacteria, viruses, chemical agents, food)
- Planning (programming systems)	- Risk-taking behaviors (home, work and leisure)		- Inherited diseases and the factors enhancing their development (diabetes)
- Financing of health services, including insurance	- Responses to effects of using alternative systems of health		- Low birth weight syndrome
- Community involvement	- Substance use (abuse and addictive practices)		- Infectious diseases induced by bacteria, viruses, fungi and parasites (leprosy, rotaviruses, malaria)
- Rationalization	- Support groups	- Labor process and health conditions - Comprehensive analysis of physical, chemical, physiological and psychological burdens involved and their expression in the epidemiological profile	- Epidemiological studies on prevalence of etiological agents and rapid diagnostic tests for agents
- Technology development, evaluation, transfer and adaptation	- Perceptions of risks and health problems		- Development and improvement of vaccines
- Pharmaceuticals and biologicals (importation, production, pricing, and utilization)	- Sexual behavior	- Agricultural transformation and health conditions - Agricultural technology . mechanization . pesticides - Changes in nutritional patterns - Family structure and child rearing practices - Temporal migration - Un- underemployment	- Control of vectors and carriers
- Medical devices	- Health learning behaviors in diverse socio-cultural and economic groups		- Serological surveys
- Management of health services (management information systems, management control, financial, personnel, food services, supply, transportation administration - levels of care, maintenance systems)	- Work and leisure		- Development and improvement of chemotherapy and clinical studies trials
- Health services utilization (financial, geographical, cultural, accessibility, alternative systems of health care)	- Social isolation		
- Health services evaluation (quality, efficiency and efficacy)	- Water-use practices	- Urbanization - Housing and environmental sanitation - Un- underemployment - Nutrition - Pollution and industrial disasters	
- Impact of the economy on the health system	- Health cultures of rural-urban migrants (i.e., adaptation in urban environments)		
- Health education and social technologies	- Health cultures of immigrant groups	- Other aspects of social environment	
- Facility design	- Adaptation in urban environments	- Cultural environment (to be developed)	
	- Responses to innovation and change in diverse environmental settings	- Physical environment (to be developed)	
	- Health education tailored to local populations		

TABLE 3

DETERMINING HEALTH RESEARCH NEEDS AT THE COUNTRY-LEVEL

Health Problem	(1) Social Demographic, Economic and Geographic Descriptors	(2) Frequency Severity	(3) Avoidable or Preventable	(4) Potential Effectiveness of Interventions	(5) Knowledge of Local Determinants
1. Diarrheal Disease	Lower Socioeconomic groups, urban and rural	Estimated Number cases/1000. urban and rural	Yes/Oral Rehydration Therapy, improved water and sanitation	100%	Poor Sanitation Low breast-feeding
2. Malaria	Urban migrant, River basin rural population	Estimate of populations at risk	Spraying	Moderate to maximum	Poor HSS maintenance in spraying
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

It was mentioned that a number of socioeconomic studies being done in the Region are bringing nearer an understanding of those problems in the proposed scheme. There was also criticism of the planning methodology adopted in the document, which was said to be similar to the CENDES/PAHO health planning method and to confront the same operational problems. Owing to time constraints it was decided that any Committee member who wished could put his suggestions in writing and send them to the Secretariat within a certain period of time. The discussion then turned to scientific planning, which, it was suggested, should be based on a knowledge of the trends in scientific work and its determinants, both those that are extrinsic, linked to the surrounding economic structures, and those intrinsic to that work, associated with the dynamics of the generation of knowledge.

It was said that for the study of these trends and determinants, scientific planning must draw on several disciplines, including epistemology, the sociology of science, the economics of science, and other areas of the study of science. In light of these expressed views, the Committee decided that it was important for PAHO to encourage studies and research in the field of the "science of science."

3. Proposed Methodology for an Administrative Diagnosis of Health Research Institutions in the Region

During the conferences on national research policies held in the Region, it has become clear that the administration of health research is important both at the macro level (institutions responsible for organizing research, national councils of science and technology, ministries of health, etc.) and at the micro level (research institutions).

Following are some of the comments made at those conferences:

a) Health research must be viewed as useful for the solution of health problems.

b) An order of priority must be assigned to research projects in accordance with a nation's health problems.

c) A study should be made of how the results of scientific health research projects in the health field are being applied.

d) The existing infrastructure for research projects is an impractical imitation of the infrastructure in developed countries.

e) There should be active communication among the various sectors that must participate in health research projects (universities, research institutions, ministries of health, etc.)

f) Efforts must be made to cut through the bureaucratic and administrative red tape that hampers research.

g) Funds should be obtained for the continuance of research activities.

Although there have been general statements of the problem areas, to our knowledge no specific diagnosis has been performed in institutions responsible for the organization of health research (macro level) or in health research institutions (micro level), and there are no methodologies for the conduct of such diagnoses.

At its XXIV Meeting, the Advisory Committee on Health Research, aware of these problems, recommended that one of the items on the agenda for its XXV meeting be a diagnosis of the situation of health research establishments.

Owing to time constraints and the lack of a diagnostic methodology for the performance of specific studies, it was decided that this diagnosis should be made by examining the administrative components of research institutions.

This diagnosis will be carried out in the following steps:

a) Development of a methodology for administrative diagnoses;

b) Testing and, if necessary, redesign of the tools for collecting the data;

c) Application of the methodology in specific countries;

d) Analysis of the results.

The methodology to be established will make it possible to conduct administrative diagnoses:

a) of institutions;

b) at the country level;

c) of institutions at the subregional level;

d) of institutions at the regional level.

These studies will be very helpful in identifying problem areas and proposing appropriate solutions at the institutional level and also in establishing regional, subregional, and national programs for the training of human resources in research administration.

The methodology developed is embodied in the following three documents:

a) Instructions for administering the questionnaire for diagnosis of the administration of health research institutions;

b) Questionnaires for diagnosis of the administration of health research institutions;

c) Reference guide for analysis of the questionnaires used in the diagnosis of the administration of health research institutions.

Discussion

The speaker provided clarification on the methodological approach developed and the ways of applying it.

Members of the Committee commended the value of the methodology as a means for the evaluation of health research institutions.

V. EXECUTIVE SESSION

1. WHO Research: A Global View

Current Socioeconomic Trends

The world population is increasing by more than 80 million each year, 90% of the increase occurring in the South; 2,000 million people live on very low wages, 600 million have no jobs and some studies estimate that in Africa and Latin America most of the labor force incorporated during the 1980s will be without employment in 1990.[25] Yet urbanization is growing, to the extent that by the year 2000, two thirds of the world's urban dwellers (2 billion people) will be in the developing countries (an increase of 2.5 times over 25 years). The coverage of water and sanitation services 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. The core of socioeconomic development, however, is education.

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 US$200 billion. The United States of America spends 35-40% of this figure.

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[25] EB77/20, 1986

Health-related research is estimated to range between 6 and 12% of overall research and development, which would imply an expenditure of US$12-24 billion worldwide, and of $5-10 billion, approximately, for the United States of America.[26] In 1984-1985, the total WHO budget for research-related activities was $130,949,800 (more than 90% of it in extrabudgetary resources), less than 0.5% of the worldwide health-related research effort.[27]

Health-related Research in WHO

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 in the Organization's history all the way back to its inception.

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

The first period started at the very beginning of WHO. In 1949 the Second World 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 the organization of research. For about 10 years thereafter medical research was carried out as an integral part of WHO's program and as required for its development.

The second period began with a proposal in 1958 for an "intensified research program" 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 program was described in two reports by the Director-General covering the five-year periods 1958-1963 and 1964-1968. This program continued until the early 1970s and led to a considerable expansion of WHO's research activities.

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

Early in the Organization's third decade, while the "research program" continued to be actively pursued, WHO's Member Governments and governing bodies, as well as its Secretariat, began to raise questions about WHO's mission, the relevance of this program to its social aim, and

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[26] Report on the World Health Situation (UN, 1983)

[27] Proposed Program Budget of WHO, 1986-1987

the effectiveness and efficiency of its work. This concern led to profound reorientations that affected, in particular, the research component of the program. The reorientations were the result of an unprecedented series of resolutions of the World Health Assembly and the Executive Board bearing on the new program policy and strategy, and, also, specifically on research and research management.

The deterioration of the financial situation brought about by the international monetary crisis has had severe repercussions on WHO's research activities, which were the most exposed to an suffered most from the successive reductions imposed on the regular budget. Activities financed from extrabudgetary sources, such as the Special Program of Research, Development and Research Training in Human Reproduction, remained practically unaffected, and new programs, such as Tropical Disease Research and Control of Diarrheal Diseases, expanded considerably.

Growing emphasis began to be laid on the long-term planning of health development, particularly by the World Health Assembly and the Executive Board. In January 1978 the Board requested its Program 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 an element for the support of research.

The landmark of the seventies was the decentralization and the development of regional research programs under the auspices of the 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 categorically stated by the Director-General at the 1983 meeting of the global ACMR. A Subcommittee on Health Research Strategy, chaired by Professor T. McKeown, prepared a report that was reviewed by the global and regional ACMRs over the following two years, and adopted by the global ACMR in October 1985.

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 were as follows:

> "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 deficiences 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;

2) Control of diseases, both infectious and noncommunicable, specific to the tropics;

3) Control of diseases associated with affluence;

4) Treatment and care of the sick;

5) Delivery of health services.

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 objectives does of course depend on advances in society, many of which are not within the responsibilities of health administrations: particularly elimination 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 for its operational activities, such as:

a) Strengthening of the scientific and technological infrastructure;

b) Manpower development;

c) Community participation;

d) Intersectoral coordination.

Discussion

In connection with the information presented on infant mortality, it was commented that using a national average unaccompanied by some measure of the dispersal around it could prompt a misinterpretation of the facts inasmuch as different geographic areas of a country and its different social classes could have quite different infant mortalities.

It was also suggested that TDR is an excellent model of promotion and support for institutional development in a given area of research, and that its contribution to the development of research has been great.

2. Report on Actions taken by PAHO/WHO on the Recommendations of the XXIV Meeting of the ACHR

This document was prepared to inform the ACHR on the measures taken by the Secretariat in connection with the recommendations made at the XXIV Meeting held in Havana from 16 to 20 July 1985. The recommendations and their associated activities are grouped according to the topics to which they relate:

Evaluation of the Research Components of Technical Programs and Regional Centers

The ACHR made a series of recommendations for the establishment of a methodology for evaluating the research components of the Organization's technical programs.

The Secretariat prepared a proposal, contained in document PAHO/CAIS/25/05, for setting up a regular evaluation process.

Seminars and Conferences on Health Research Policies

The ACHR felt that "PAHO/WHO should continue encouraging health ministries and universities to recognize the importance of research to the overall development process. To do this, it recommended that the Organization hold seminars and conferences on health research policy, similar to those held from 1976 to 1982, for the staffs of the health ministries and national education and research councils" (Report to the Director).

In the area of work proposed by this recommendation, PAHO/WHO provided technical and financial support to the I Latin American and Caribbean Workshop on Health Research, held in Havana in July 1984. At this workshop it was recommended that further work be done in the subjects having to do with scientific and technical information systems and indicators of scientific activity. To discuss these subjects, a II Workshop was held in Mexico City from 3 to 7 February 1986.

Two meetings have been scheduled for the last quarter of 1986 to deal with the subject of "Regional Policies and Strategies for Developing Research in the Countries." One will be held in Canada for English-speaking countries, and the other in Costa Rica for the Central American countries.

Relationships with National Health Research Coordinating Bodies

The Committee recommended that "the Organization, in addition to continuing the strategy of strengthening its relationships with health and education ministries and science and technology councils, should also establish working relationships with national legislative assemblies and congresses."

The Secretariat was of the view that, for the better planning of mechanisms and activities for cooperation with state health research coordinating bodies, including those of the legislative branch, it would be worthwhile initially to construct an overall picture of how scientific activity is organized in the countries of the region, and to identify the state institutional complexes concerned with this activity. The document included a proposal for the conduct of a survey for this purpose.

Bibliographic Updates

The Committee recommended that "PAHO's technical programs prepare and distribute bibliographic updates and reviews for their respective priority research areas."

The Secretariat hired a sociologist to update the Latin American Bibliography on Social Sciences in the Health Field. The bibliographic references from this review will be incorporated into the BIREME data bank. Publication RD 24/1 contains a bibliographic review of research on Chagas' disease, made by HPT, and document PNSP/86/03/29 one on health technology done by HSA.

Formulation of Policies on Health Research

The committee recommended that PAHO/WHO "formulate recommendations on policies, priorities, classification, and strategies for developing basic and applied research in the Region."

The Secretariat held a meeting of experts at Harpers Ferry in October 1985 to develop a methodology for the formulation of health research policies. The final document from this meeting will serve as basis for the discussions to be held in the Canadian and Costa Rican meetings mentioned above (Doc. PAHO/CAIS/25/11).

Research in Tropical Diseases

The committee recommended the presentation in this meeting of an analysis of the research on tropical diseases done in the countries of the Region. The Tropical Diseases Program prepared this analysis, which was distributed to all Committee Members.

Eradication of Poliomyelitis

The Chairman of the ACHR requested the presentation in this meeting of information on strategies for expanding vaccination coverage and poliomyelitis eradication. The Maternal and Child Health Program prepared a document on the subject.

Discussion

Speakers commended the measures and course taken by the Research Coordination Unit. There was also interest in knowing what had been done toward setting up an emergency fund for the purchase of materials and reagents.

The Secretariat explained that the initial programming for the unit had provided for the establishment of that fund, but budget cuts had forced its elimination.

In the Committee's view, this was a felt need of researchers and countries, and it suggested, firstly, that PAHO could give renewed consideration to the establishment of an emergency fund if resources were available and, secondly, that PAHO, through its Country Offices, could collaborate actively in ordering materials and equipment and in clearing them through customs. Other options suggested in the event that the emergency fund proved unfeasible were its creation with funds from the countries and, perhaps, from industry, or as a revolving fund similar to the one for the purchase of vaccines.

In the area of tropical diseases in the Region, it was considered important to increase the number of research projects in malaria with emphasis on the social, political and economic aspects.

3. Selection of Members of the Committee to Participate in Evaluation of the Research Component of PAHO/WHO's Technical Programs

On this point it was advised that, if the proposed evaluation scheme were approved by the Director, work would begin in July 1986.

The Secretariat had designed, and distributed to the members of the Committee, a blank form on which they could state their preferences and the dates on which they would be available to participate in the evaluation process.

4. Provisional List of Topics for the XXVI Meeting of the Advisory Committee on Health Research, and its Place and Date

Dr. Sergio Arouca, President of the Oswaldo Cruz Foundation, invited the Committee to hold its next meeting in Rio de Janeiro, Brazil, and offered the Foundation's facilities for the event. The proposal was unanimously accepted and the meeting was scheduled for 13 to 17 April 1987. The following topics were proposed for the provisional agenda:

- Analysis of the results of research under the Grants Program
- Establishment of machinery for technical cooperation among countries in the field of biotechnology
- Research in appropriate technology in the maternal and child area, including fertility control
- Setting priorities in biotechnology applied to health
- Current situation of reservoirs in Latin America as health hazards
- Establishment of machinery for technical cooperation among countries in the design of models for prevention and control of leading health problems
- Studies of changes in progress in the organization of health services in the Region
- Monitoring of research under the initiatives in Central America, the Caribbean and the Andean Region
- Applied research on specific procedures for the prevention of common pathologies in given countries
- Research needed to attain the goal of polio eradication by 1990
- Priorities in health research 1988-1990
- Responsiveness of research going forward in the Region to health research priorities
- Plan for the development of health research in the Region during the period 1987-1990.

5. Review of the Final Report of the XXV Meeting of the Advisory Committee on Health Research

The members of the Committee reviewed the report and requested that it show their disagreement with and vehement protest against the prevention of Dr. Alina Llop of Cuba from being present in the Meeting.

They also insisted that a copy of the letter addressed to the Director, signed by the Chairman and expressing that protest, be made a part of the report.

The recommendations made during the discussions are presented in Annex I to this report.

Before starting the Closing Session, the Chairman opened the floor for any other matter not on the agenda.

The Secretary of the Meeting, Dr. María Leite-Ribeiro, referred to the financial problems noted at the beginning of the Meeting and indicated that the Committee might, as an austerity measure, have to hold its meetings every two years instead of annually as it had done so far. She also said that, to give continuity to the Committee's proceedings, a subcommittee could be appointed consisting of the Chairman, Vice Chairman and three members. The three members could be appointed by rotation. The Subcommittee would meet in the years in which the entire Committee did not meet.

While acknowledging the financial problems that had motivated the proposal, some members wanted this decision to be deferred to next year. They felt that two years was too long an interval for the proper monitoring of research work.

The Chairman declared closed the working sessions and opened the Closing Session.

VI. CLOSING SESSION

1. Statement by the Chairman of the Advisory Committee on Health Research

Dr. Robbins, addressing himself to the Director of PASB, summed up the content of the report and underscored the need to strengthen the PAHO/WHO Grant Program, the machinery for cooperation and coordination with national research councils, and the provision of essential supplies and equipment for research.

Dr. Robbins referred to the letter he had addressed to the Director on behalf of all the members of the Committee on the situation that had led to the absence of Dr. Llop. Dr. Robbins said that this situation was one that threatened the integrity of an international agency and the participation of all those who were working with it.

Following this brief review, Dr. Robbins yielded the floor to the Director of the PASB.

2. Statement by the Director of the Pan American Sanitary Bureau

Dr. Guerra de Macedo thanked Dr. Robbins for the concise information he had provided, and the Committee for the work it had done. He regretted not having been able to attend all the working sessions and said that the experience had nevertheless been most gratifying and exceedingly useful to him. By way of explanation, and not as a justification, he said that, when the Committee held its meetings in Headquarters, it was difficult for him to turn aside from the demands of his post for extended periods of time. In the coming meeting in Rio, however, he would have the opportunity to "get even" and enjoy the discussions.

Regarding the membership of the Committee, he wished it could be continued. He regretted the need for a turnover of the membership, particularly when a group of people of such high qualifications had been achieved as today sat on the ACHR. He realized, however, that he was obliged to terminate the appointments of two of the members for failure to attend two consecutive meetings, and his regret also stemmed from his regard for them as extraordinary scientists and administrators.

The Director insisted, as he had done in his inaugural speech, that mechanisms would have to be designed that would permit a maximum of integration and participation of the Committee's members in the work of the Organization. He also repeated that the high standing of the Committee, built up in 25 years of collaboration with the Organization, had an extraordinary rallying power of its own and constituted a capital that should be invested on behalf of the health of the American peoples.

Dr. Guerra de Macedo profoundly regretted the absence of Dr. Llop. He thanked the Committee for the letter it had sent him, expressing a unanimous view and position on what had happened, which, he said, strengthened his own view.

The Director then referred to some specific matters that the Committee had considered. He spoke first of the research funds, agreeing that they were limited, and indicated that they would be increased as the Organization's overall budget permitted. On this point he also took cognizance of the efforts being made by the Research Coordination Unit to implement machinery that would permit better articulation of projects in the priority subjects.

He remarked that setting up a revolving fund was a viable way to give momentum to the development of a national system for the provision of critical inputs in support of the research of national institutions.

In regard to research on malaria, the Director shared the concern of the Committee's members and said that the situation had not only grown worse, but had become more complex and difficult to control.

Dr. Guerra de Macedo also voiced concern over research policies in the Region and reiterated that they would have to offer an integrative vision for the concrete and objective guidance of science planners.

The Director described the meeting as an agreeable gathering that must, unfortunately, come to an end. He urged the members of the Committee to keep in direct touch with Dr. María Leite-Ribeiro and to communicate with him without standing on ceremony.

In closing, the Director said that he was optimistic about the progress of research. His optimism was warranted by the vital part played by scientific and technological development in surmounting all aspects of underdevelopment and, hence, in the overall development of countries, and by the efforts being made to generate interest and mobilize resources for large-scale collaborative projects.

When the Director concluded his remarks, Dr. Robbins expressed thanks for the contributions of all those who had made possible the XXV Meeting of the ACHR. He then pronounced the meeting closed.

Annexes

ANNEX I

RECOMMENDATIONS MADE BY THE XXV MEETING OF THE ADVISORY COMMITTEE ON HEALTH RESEARCH

I. ORGANIZATION AND MANAGEMENT OF RESEARCH IN PAHO/WHO

1

The ACHR, considering:

- The Progress Report on the PAHO/WHO Grant Program for the biennium 1984-85, presented by the Secretariat,

Recommends:

- That the priorities and administrative procedures being adopted by the Grant Program in accordance with the guidelines of Directive 85-01 of February 1985 be maintained in the coming year.

- That a methodology be designed and implemented for the evaluation and dissemination of knowledge generated by Program-supported projects.

2

The ACHR, considering:

- The inflation in the countries of Latin America and the Caribbean; and

- The foreign exchange shortage in most of the countries in the Hemisphere,

Recommends:

- That the Director authorize transfers of funds for research in United States dollars to country institutions through the administrative facilities of PAHO's Country Offices.

3

The ACHR, considering:

- The importance of scientific research to the emergence, establishment and advancement of the medical and public health sciences in Latin America;

- The adverse effects of the current economic crisis on scientific research; and

- The orientation toward health services research under the existing program,

Recommends:

- That a new research grant program additional to the existing one be set up to make grants to investigators in the basic medical sciences and in clinical research. The funding for this program would be provided from PAHO's extrabudgetary sources.

- That grants be for up to US$10,000, and be used to complement the financing of research projects in the areas mentioned.

- That the grants be allocated by a committee of scientists appointed by the Director of PAHO/WHO from a list proposed by the ACHR.

- That in allocating grants the Committee consider a) the quality of the project, b) the background of the researcher in charge, and c) the participation of researchers from two or more countries in Latin America.

4

The ACHR, considering:

- The importance of research as a core element of the management of knowledge, PAHO's primary mission; and

- The need that this Committee's recommendations find expression in the Organization's budget,

Recommends:

- That the Director set up a subcommittee of the ACHR consisting of some of its members to monitor the construction of that budget.

5

The ACHR, considering:

- The methodological proposal for evaluation of the research component presented by the Secretariat;

- That the Committee's prime function is to advise the Director in formulation of the Organization's overall research policy; and

- That to perform this function it must make a study of the research work being conducted under the Organization's technical programs,

Recommends:

- That the Director implement the methodology for evaluation of the research components of the technical programs of the Organization and its regional centers.

II. ISSUES AND TRENDS IN HEALTH RESEARCH

1

The ACHR, considering:

- The excellent level of the progress reports on the medical sciences presented by scientists of the National Institutes of Health of the United States of America,

Recommends:

- That the Pan American Sanitary Bureau publish in extenso the presentations made by the scientists of the National Institutes of Health of the United States of America on 22 April 1986.

2

The ACHR, considering:

- That many of our countries face serious problems in keeping in optimal operating condition a variety of articles of biomedical equipment needed for the conduct of programs and research in the health field;

- That this equipment represents a sizable investment in many cases, and remains unused or underused for lack of proper maintenance; and

- That PAHO has maintained of late a close relationship with the Biomedical Engineering and Instrumentation Branch of the National Institutes of Health of the United States of America,

Recommends:

- That PAHO continue its efforts to facilitate the training of engineers and technical personnel of its Member Countries in the maintenance, repair and design of biomedical equipment.

- That arrangements be made with one or more centers, such as the Center for Technological Development and Applications (CEDAT) in Mexico, which are already experienced in the field, for training of this kind to the personnel of health establishments and universities under PAHO sponsorship.

III. RESEARCH COMPONENT OF THREE SUBREGIONAL PAHO/WHO TECHNICAL COOPERATION INITIATIVES

1

The ACHR, considering:

- The report presented by the Secretariat on the Health Initiative in Central America;

- That the intensive effort being made must produce improvements in the health status of the population in the subregion;

- That research is of vital importance to progress toward the seven goals of the Initiative; and

- That it is essential to evaluate the impact of the measures in the subregion because they may provide experience applicable in other countries,

Recommends:

- That the Director of the PASB make every necessary effort to assure funds to facilitate the research work under the Health Initiative in Central America.

- That in its next meeting the Committee be presented with a progress report on the research being done in connection with the Central American Initiative.

- That the Committee be informed in its next meeting on the progress of the search for financing for the Central American Initiative and on how the program is helping each country and contributing to cooperation among them.

2

The ACHR, considering:

- The report on the research component of the PAHO/CARICOM Caribbean Initiative; and

- The report of the Chairman of the Committee on his participation in the Workshop on Health Services Research and in the XXXI Congress of the Medical Research Council of the Caribbean Community,

Recommends:

- That the Director promote greater collaboration between PAHO and the Medical Research Council of the Caribbean Community.

- That the Director enlarge the ACHR by adding a representative for the Caribbean scientific community.

IV. ORGANIZATION OF SCIENCE AND TECHNOLOGY IN THE HEALTH FIELD

1

The ACHR, considering:

- That preliminary studies point to the predominance in the Region of research initiatives in the health field by universities over those of other institutions, particularly in the area of biomedicine;

- That there are universities in the Region with manpower and infrastructures suited for health research;

- That research in universities, thanks to its possibility of greater interdisciplinarity, is better suited to address health in its sociocultural, economic and environmental aspects; and

- universities and health research institutes must be encouraged to contribute more to attainment of the goal of HFA/2000,

Recommends:

- That the Organization establish real and effective contacts with the universities and research institutes in the Region for the purposes of:

  a) Keeping abreast of the health research being done in those institutions;

  b) Promoting health research in subjects to which the Organization attaches regional priority;

  c) Supporting, as the programs require and resources permit, the health research being done in universities and research institutes.

- That relations be maintained with local bodies (universities, and science and technology councils) and international agencies (UDUAL, CSUCA, etc.) in order to learn about and encourage health research.

- That the "Report of the Ad Hoc Group on Regional Research Policies and Strategies for Attaining the Goal of HFA/2000" be made known to universities and research institutions.

- That the universities be surveyed for their experience with models designed for the strengthening of health research, for communication to the health ministries of the countries in the Region.

- That universities be encouraged to extend their health research into new, nontraditional fields of biomedicine and epidemiology.

- That these recommendations be implemented through the Organization's Representatives in the different countries either directly or through the health ministries, as appropriate in each specific case.

2

The ACHR, considering:

- The importance of exchanges of researchers and information among countries for the progress of the medical sciences and public health in Latin America and the Caribbean;

- The potential of PAHO through its Country Offices for communication with researchers in different countries and for disseminating information; and

- The existence of cooperation programs such as those for workshops and training courses of the Biosciences Network and of the Academy of Sciences of Latin America, directed at bringing about exchanges of researchers and of scientific and technological information,

Recommends:

- That PAHO's cooperation with programs for workshops and training courses in the basic and applied medical sciences conducted by agencies and institutions in Latin America and the Caribbean be made more effective.

- That workshops and training courses be held with a view to exchanges of knowledge, experiences and technologies in a specific subject of the medical sciences, and to the establishment of contacts among participating researchers for the joint conduct of research projects.

V. EXECUTIVE SESSION

1

The ACHR, considering:

- The information supplied by the Secretariat on tropical diseases research; and

- The worsening of malaria in many countries of the Region,

Recommends:

- That PAHO promote research in malaria, and particularly in the social aspects, health services and technologies for control of the disease.

2

The ACHR, considering:

- The document prepared by the Ad Hoc Group on "Regional Research Policies and Strategies for Attaining the Goal of HFA/2000; and

- That this document must become an important instrument for the formulation of policies on health research in the countries of the Region,

Recommends:

- That the aforesaid document be studied by every member of the Committee.

- That their views and possible suggestions for its revision be sent to the Research Coordinating Unit within not longer than 60 working days.

ANNEX II

XXV MEETING OF THE ADVISORY COMMITTEE ON HEALTH RESEARCH

21-25 April 1986

Washington, D.C.

AGENDA

Lunes, 21 de abril

SESION INAUGURAL

8:30 a.m. - 10:00 a.m.	Palabras del Presidente del Comité Asesor de Investigaciones en Salud Dr. F. C. Robbins
	Palabras del Director de la Oficina Sanitaria Panamericana Dr. Carlyle Guerra de Macedo
10:00 a.m. - 1:30 p.m.	Receso

SESION I ORGANIZACION Y ADMINISTRACION DE LA INVESTIGACION EN LA OFICINA SANITARIA PANAMERICANA

10:30 a.m. - 10:50 a.m.	Informe de progreso del programa de subsidios de la OPS/OMS, 1984-1985 Dra. María Leite-Ribeiro
10:50 a.m. - 11:10 a.m.	Discusiones
11:10 a.m. - 11:30 a.m.	Fondos para actividades de investigación en la OPS/OMS Sr. John Silvi
11:30 a.m. - 12:15 p.m.	Discusiones
12:15 p.m. - 2:00 p.m.	Receso
2:00 p.m. - 2:20 p.m.	Estudio sobre las investigaciones propuestas por los Cuerpos Directivos de la OPS/OMS 1942 - 1984 Dra. María Leite-Ribeiro
2:20 p.m. - 2:40 p.m.	Discusiones

2:40 p.m. - 3:15 p.m.	Propuesta metodológica para la evaluación del componente de investigación de los programas técnicos de la OPS/OMS Dra. María Leite-Ribeiro
3:15 p.m. - 3:30 p.m.	Receso
3:30 p.m. - 5:00 p.m.	Discusiones

Martes, 22 de abril

SESION II TEMAS Y TENDENCIAS DE LAS INVESTIGACIONES EN SALUD

9:00 a.m. - 9:30 a.m.	Las investigaciones médicas y su vinculación con las universidades en Canadá Dr. J. C. Laidlaw
9:30 a.m. - 10:00 a.m.	Discusiones
10:00 a.m. - 10:15 a.m.	Receso
10:15 a.m. - 10:45 a.m.	La investigación sobre atención primaria en comunidades aisladas y remotas del Canadá Dr. Brian Wheatley
10:45 a.m. - 11:15 a.m.	Discusiones
11:15 a.m. - 11:45 a.m.	Temas y tendencias de la investigación en salud en los Estados Unidos de América Dr. Thomas Malone
11:45 a.m. - 12:30 p.m.	Discusiones
12:30 p.m. - 2:00 p.m.	Receso
2:00 p.m. - 5:00 p.m.	Panel de discusión con científicos de los Institutos Nacionales de Salud de los Estados Unidos de América Stone House, Bethesda, Maryland

Miércoles, 23 de abril

SESION III EL COMPONENTE DE INVESTIGACION DE TRES INICIATIVAS SUB-REGIONALES DE COOPERACION TECNICA DE LA OPS/OMS

9:00 a.m. - 9:30 a.m.	Aplicación y Generación del conocimiento de la iniciativa de salud en Centroamérica Dr. José Romero Teruel
9:30 a.m. - 10:00 a.m.	Discusiones
10:00 a.m. - 10:30 a.m.	Receso
10:30 a.m. - 11:00 p.m.	Iniciativa de la OPS/OMS/CARICOM para el Caribe Dr. George Alleyne
11:00 a.m. - 11:30 a.m.	Discusiones
11:30 a.m. - 12:00 p.m.	Plan Conjunto de acción para la región andina Dr. Luís Carlos Ochoa
12:00 p.m. - 12:30 p.m.	Discusiones
12:30 p.m. - 2:00 p.m.	Receso

SESION IV ORGANIZACION DE LA CIENCIA Y LA TECNOLOGIA EN SALUD

2:00 p.m. - 2:30 p.m.	La investigación en salud en la universidad Dr. José Roberto Ferreira
2:30 p.m. - 3:00 p.m.	Discusiones
3:00 p.m. - 3:15 p.m.	Receso
3:15 p.m. - 3:45 p.m..	Informe del Grupo Ad Hoc sobre Políticas y Estrategias Regionales de Investigación para alcanzar la meta de SPT/2000 Dr. Arlene Fonaroff
3:45 p.m. - 4:30 p.m.	Discusiones

Jueves, 24 de abril

SESION V SESION EJECUTIVA CERRADA

9:00 a.m. - 9:15 a.m.	Informe sobre el progreso del Programa de erradicación de la Poliomielitis Dr. Ciro de Quadros
9:15 a.m. - 9:45 a.m.	Propuesta metodológica para el diagnóstico administrativo de las instituciones de investigación en salud de la Región Sr. Jorge Ortiz
9:45 a.m. - 10:00 a.m.	Discusiones
10:00 a.m. - 10:15 a.m.	Receso
10:15 a.m. - 10:45 a.m.	La investigación en la OMS una visión global Dr. B. G. Manssourian
10:45 a.m. - 11:15 a.m.	Informe sobre las acciones realizadas por la OPS/OMS en relación a las recomendaciones de la XXIV Reunión del Comité Asesor de Investigaciones en Salud Dra. María Leite-Ribeiro
11:35 a.m. - 12:00 p.m.	Discusiones
12:00 p.m. - 12:15 p.m.	Selección de los Miembros del Comité que participarán en la evaluación del Componente de Investigación de los Programas Técnicos
12:30 p.m. - 2:00 p.m.	Receso
2:00 p.m. - 5:30 p.m.	Preparación del Informe Final

Viernes, 25 de abril

SESION V (CONTINUACION DE LA SESION EJECUTIVA)

9:00 a.m. - 10:00 a.m.	Lectura del Informe Final

10:00 a.m. - 10:30 a.m.	Receso
10:30 a.m. - 11:45 a.m.	Discusión y aprobación del Informe Final

SESION DE CLAUSURA

11:45 a.m. - 12:45 p.m.	Palabras del Presidente del Comité Asesor de Investigaciones en Salud de la OPS/OMS Dr. F. C. Robbins Palabras del Director de la Oficina Sanitaria Panamericana Dr. Carlyle Guerra de Macedo

ANNEX III

XXV MEETING OF THE ADVISORY COMMITTEE ON HEALTH RESEARCH

LIST OF PARTICIPANTS

Prof. Antonio Sergio da Silva Arouca	Presidente, Fundacao Oswaldo Cruz Caixa Postal 926, CEP 20000, Manguinhos Rio de Janeiro, RJ, Brasil
Dr. Roberto Caldeyro-Barcia	Director, Profesor Departamento de Perinatología Hospital de Clínicas "Dr. Manuel Quintela" Avenida Italia s/n - Piso 16 Montevideo, Uruguay
Dr. Luis Fernando Duque	Director Instituto Nacional de Salud Apartados Aéreos 80080 y 80334 El Dorado con Carrera 50 Bogotá, D.F., Colombia
Dr. Rodrigo Guerrero */	Profesor Universidad del Valle Apartado 2188 Cali, Colombia
Dr. David Hamburg */	President Carnegie Corporation of New York 437 Madison Avenue New York, NY 10022
Dr. J. C. Laidlaw	Scientific Advisor to the President Medical Research Council of Canada Ottawa, Ontario K1A 0W9 Canada
Dra. Alina Llop **/	Profesora de Microbiología Subdirectora de Microbiología Instituto de Medicina Tropical "Dr. Pedro Kouri" Apartado 601 La Habana, Cuba

*/ Unable to attend.
**/ Visa to enter the United States of America denied.

Dr. Aldo Neri	Ministro de Salud y Acción Social Ministerio de Salud y Acción Social Defensa 192, 4to piso, Of. 4027 Buenos Aires, Argentina
Dr. V. Ramalingaswami 1/*	Director General Indian Council of Medical Research New Delhi, India
Dr. Frederick C. Robbins 2/	Professor Emeritus Case Western Reserve University Dept. of Epidemiology and Biostatistics Room WA-34 Cleveland, OH 44106
Dr. José Rodrígues Coura	Jefe, Departamento de Medicina Tropical Instituto Oswaldo Cruz Caixa Postal 926, CEP 20.000 Manguinhos Rio de Janeiro, RJ, Brazil
Dr. Ceferino Sánchez	Rector Universidad de Panamá Panamá, Panamá
Dr. Guillermo Soberón Acevedo	Secretario de Salud Secretaría de Salud México, D.F., México
Dr. Raimundo Villegas	Instituto Internacional de Estudios Avanzados Apartado 17606 Parque Central Caracas 1015-A, Venezuela
Dr. Richard Wilson */	Director of Health Sciences International Development Research Center 60 Queen Street P.O. Box C.P. 8500 Ottawa, Canada K1G 3H9

*/ Unable to attend.
1/ Chairman, ACMR Global.
2/ Chairman, PAHO/WHO Advisory Committee on Health Research.

Dr. Rodrigo Zeledón	Director Consejo Nacional de Ciencias y Tecnología de Costa Rica Apartado 10318 San José, Costa Rica (Ministro de Ciencia y Tecnología Nombrado)

ORADORES INVITADOS

Dr. Arlene Fonaroff	International Coordination and Liaison Branch Fogarty International Center National Institutes of Health 9000 Rockville Pike Building 38-A, Room 610 Bethesda, MD 20892
Dr. Thomas E. Malone	Deputy Director National Institutes of Health 9000 Rockville Pike Bethesda, MD 20892
Dr. Brian Wheatley	Branch Director for Research Health and Welfare Canada Ottawa, Ontario, Canada

OFICINA SANITARIA PANAMERICANA

Dr. Carlyle Guerra de Macedo	Director
Dr. Robert Knouss	Director Adjunto
Dr. Luis Carlos Ochoa	Subdirector
Dr. George A. O. Alleyne	Director, Area de Desarrollo de Programas
Dr. Pedro N. Acha	Director, Area de Infraestructura de Sistemas de Salud
Dr. José Roberto Ferreira	Coordinador, Programa de Personal de Salud
Dr. José Romero Teruel	Jefe, Unidad de Análisis y Planificación Estratégica
Dr. Ciro De Quadros	Programa de Inmunizaciones Coordinación de Salud Maternoinfantil

Dra. María Leite-Ribeiro	Jefe, Unidad de Coordinación de Investigacion, Secretaria CAIS
Dr. Alberto Pellegrini	Unidad de Coordinación de Investigaciones
Sr. Jorge Ortiz	Unidad de Coordinación de Investigaciones
Sr. John Silvi	Unidad de Coordinación de Investigaciones

PERSONAL DE APOYO

Sra. Eleonor Ambler	Unidad de Coordinación de Investigaciones
Srta. Mary Camacho	Unidad de Coordinación de Investigaciones
Sra. Rita Leiva	Unidad de Coordinación de Investigaciones

ORGANIZACION MUNDIAL DE LA SALUD

Dr. B. G. Mansourian	Medical Officer, Office of Research Promotion and Development World Health Organization Geneva, Switzerland
Dr. Thomas McKeown */	Department of Social Medicine The Medical School Edgbaston, Birmingham B-15 2FJ England

OBSERVADORES

Dr. Juan V. Pillet	World Bank Population, Health and Nutrition Department

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*/ Chairman, Subcommittee on Health Research Strategy for SPT/2000, Global Advisory Committee on Medical Research.

ANNEX IV

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION

525 TWENTY-THIRD STREET, N.W., WASHINGTON, D.C. 20037, U.S.A. CABLE ADDRESS: OFSANPAN

IN REPLY REFER TO: TELEPHONE 861-3200

(TRANSLATION)

DRC/49/6

25 April 1986

Dr. Carlyle Guerra de Macedo
Director
Pan American Health Organization
Washington, D.C.

Sir,

The Advisory Committee on Health Research (ACHR) of the Pan American Health Organization, Regional Office of the World Health Organization, is a collegial body of scientists whose work in the health field has gained them wide recognition both in and beyond the borders of their native countries. In the twenty-five years of its existence it has included professionals from most of the countries in the Americas.

The Committee has been of valuable assistance in the promotion of health research and has thereby made a positive contribution to attainment of the higher levels of well-being enjoyed by the peoples of the Americas today. It does its work in a setting of complete freedom and without regard to any political or ideological considerations.

The Committee has been informed that Dr. Alina Llop of Cuba was not granted a visa to attend the XXV Meeting of the Committee, now in progress in this city.

This decision is utterly incomprehensible and unacceptable. It is directly injurious to the work entrusted to the Committee, strikes at the most elementary rules of international comity, and runs counter to the very essence of the international organization. Therefore, the members of the Committee voice their most energetic protest, expect a clear explanation for the refusal of a visa to Dr. Llop, and hope that a situation of this kind will never occur again.

This is especially true when it is considered that the Committee enjoyed the kind hospitality of the Governments of Venezuela in 1981, Mexico in 1983, and Cuba in 1985, in meetings that were attended by distinguished scientists of the United States of America, who were made welcome and treated with utmost courtesy.

Sincerely,

/s/ Dr. Frederick C. Robbins
Chairman of the ACHR

XXV MEETING OF THE ADVISORY COMMITTEE ON HEALTH RESEARCH OF PAHO/WHO

STONE HOUSE
NATIONAL INSTITUTES OF HEALTH OF THE UNITED STATES OF AMERICA

Panel on Topics and Trends in Research at the National Institutes of Health

Chairman: Dr. Frederick Robbins

2:00 p.m.	Palabras de Bienvenida Dr. Craig Wallace Dr. Thomas Malone
2:20 p.m.	Visión General de la Investigación que realizan los Institutos sobre Prevención de Enfermedades Dr. John T. Kalberer
2:40 p.m.	Inmunología y Desarrollo de Vacunas para Enfermedades Tropicales y Transmisibles incluyendo SIDA Dr. Anthony S. Fauci
3:00 p.m.	Salud Maternoinfantil Dr. Duane F. Alexander
3:20 p.m.	Salud del Adulto -Proceso de Envejecimiento Dr. Franklin Williams -Enfermedades Cardiovasculares Dr. William T. Friedewald -Cancer Dr. Edward Sondik -Neurociencias Dr. Murray Goldstein

4:20 p.m.	Investigación sobre Salud y Comportamiento
	Dr. Stephen Weiss
4:35 p.m.	Mantenimiento de Instrumental Biomédico
	Sr. Howard Metz
4:50 p.m.	Discusiones
5:20 p.m.	Palabras de Clausura
	Dr. Frederick Robbins
5:30 p.m.	Recepción