

PAN AMERICAN HEALTH ORGANIZATION

PAHO/ACHR/25/10
Original: Spanish

XXV MEETING OF THE ADVISORY COMMITTEE
ON HEALTH RESEARCH

Washington, D.C.
21-25 April 1986

APPLICATION AND GENERATION OF KNOWLEDGE IN THE
HEALTH INITIATIVE OF CENTRAL AMERICA

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HEALTH INITIATIVE OF CENTRAL AMERICA

Analysis and Strategic Planning (DAP)

March 1986

Introduction

The Management of Knowledge is the essence of PAHO's technical cooperation with its Member Countries.⁽¹⁾ 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 with insufficient information in order to promote and support new studies and research.

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

The Health Initiative in Central America

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⁽²⁾ and signed the Declaration of San Jose, 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:

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.⁽⁴⁾ Copies of the projects were submitted for consideration by external cooperation ministries in developed countries and multilateral and bilateral agencies⁽³⁾

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

PROJECTS AND ESTIMATION OF LOCAL AND EXTERNAL COSTS

IN PRIORITY AREAS

(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	307	522,558.8	1,415,813.6

Use of Existing Information and Research

A plan on this scale needs a large volume of information and 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.

- a) Political analysis: The special situation of the Central American isthmus at the beginning of the eighties was considered from the political standpoint. This analysis⁽²⁾ identified the need and timeliness of an operation in the health field that could benefit the peoples of that subregion and at the same time play a role in promoting peace, understanding and solidarity among countries.

- b) Epidemiological analysis: In identifying the stated priority areas, the best and most recent statistical and epidemiological information on hand was used. A health profile was constructed for each country using the information and findings of researches and studies of the last few years. The profiles were brought together in a special publication⁽⁵⁾ describing the health situation in the Central American isthmus.

- c) Technical/Scientific analysis: As previously noted, the stage following the identification of and agreement on the priority areas is the definition of specific projects and operations. At this level, a process was set up for the mobilization of manpower with the scientific and technical capabilities needed for working out

the needed details on each activity. This stage eventuated in the preparation of 307 initial projects⁽⁶⁾, which have passed through a process of successive revisions and formulations and are, in some cases, already in execution as the needed financial resources have become available and mobilized.

- d) Economic/Financial analysis: A study was developed on the economic situation in the Central American region, the crisis, the external debt, the disintegration of the Central American Common Market, along with the possibility of obtaining economies of scale from a regional approach and rationalization of the use of resources in general. Each project needs for its development, in addition to technological feasibility, a financial feasibility analysis and proof of its cost-effectiveness. Professionals and specialists in planning and epidemiology contributed their knowledge in consultations held to complement these analyses, particularly in cases in which the funds were available for execution of the projects.

Generation of New Knowledge

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 as 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 coun-

tries.

- a) The study published by PAHO in 1982 on "La Investigación en el Campo de la Salud en Once países de América Latina"⁽⁷⁾ 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.

SCIENTIFIC AUTHORS IN CENTRAL AMERICA AND PANAMA
(1981)*

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	628	--

*Source: Institute for Scientific Information, 1981

The same study⁽⁷⁾ 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.⁽⁸⁾ Basic research is understood as 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 TYPES OF RESEARCH AND COUNTRIES

Country	TYPES OF RESEARCH			
	Basic %	Applied %	Developmental %	Combinations %
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

At present an effort is 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. Development of the Health Initiative has brought out the importance of research and the need of having a scientific contingent to support the conduct of the 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, which permitted the framing of criteria that were adopted by the local professionals in the classification of the different projects. (9)

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 a single project, and others canceled.

c) The design of new projects for which external financing is being

sought also has financial implications inside the 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.⁽¹⁰⁾

d) A special study of Needs and Capabilities for Technical Cooperation (TCDC) among the countries of Central America and Panama was recommended by Resolution XI of the Meeting of Health Ministers of that Subregion.⁽¹¹⁾ 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. One of the fundamental outcomes expected from implementation of the Plan is the possibility of making over the infrastructure of the health services in the countries of the Central American isthmus. Better coordination of the health services operated by the Health Ministries and those of social security is essential if their coverage is to be extended and they are to be made more accessible to the needier population.

A series of studies have been proposed and are in progress with PAHO support:⁽¹²⁾

- A study of the services 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.

- b) Manpower: For the purpose of building up the documents for projects, studies were made of the availability of human resources in the Region and their quality, and forecasting the demand for and composition of the manpower that will be needed in the future to meet changing demographic conditions and requirements for the extension of coverage.

In this priority area several subjects of studies have been identified, among them the detailed and ongoing inventorying of installed manpower training capacities, 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. An analysis is in progress toward the organizing of a system of 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 progress 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 were made in 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 itself a research project and experiment. Its purpose is to improve the health of the Central American population, 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.

We look forward not only to constructive results 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.

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