XXXIV ACHR

Meeting of the Advisory Committee on Health Research of the Panamerican Health Organization
12-14 July 1999

RESEARCH FINANCING IN LATIN AMERICA AND THE CARIBBEAN

Research Coordination
Division of Health and Human Development
Pan American Health Organization
Pan American Sanitary Bureau Regional Office of the World Health Organization
Washington, D.C.
1999
## CONTENTS

**RESEARCH FINANCING IN LATIN AMERICA**

**AND THE CARIBBEAN**

| 1. Trends in Financial Resources | .........................................................3 |
| 2. Support for Resource Mobilization | ..........................................................8 |
| 2.1 Description of the Information System | .......................................................9 |
| 2.2 Achievements | ..............................................................12 |
Research Financing in Latin America and the Caribbean

In several Regional meetings, ACHR has stressed the lack of reliable information in Latin American Countries on health research (HR) financing, and highlighted the need for updated data on resource flows to guide policy-making for the mobilization of national and international resources. PAHO has directly addressed these concerns through initiatives centered on two fundamental aspects regarding the funding of HR: the identification of trends in financial resources available for HR, and dissemination of information on funding sources. An evaluation of current shortcomings in the organization and dissemination of information for HR financing led to develop instruments for monitoring public and private funding sources of domestic or external origin. PAHO sought to support researchers by creating research mechanisms for better identification of potential funders, and proposes that active advocacy be pursued to stimulate new funding sources.

1. Trends in Financial Sources:

A study conducted by PAHO in Argentina, Brazil, Chile, Mexico, and Venezuela and presented in the 1996 ACHR Regional meeting, indicated two major trends in the financing of HR: an increase in the share of grant support by private sources for science and technology development, and an increase in external financing for countries, primarily by the IDB and the World Bank. These developments occurred in a context in which spending in science and technology (S&T) in general for these countries oscillates between 0.24 and 0.75 percent of the GDP.¹

¹ An exploratory study initiated recently in Chile, Brazil, and Mexico identified similar trends, despite the study’s limitations due to its rapid evaluative nature and a lack of disaggregated data related specifically to health research spending, particularly in the private sector. Consequently, it is still unclear whether the current private sector investments in science and technology represent an absolute or relative change in spending.
One of the primary barriers to improving knowledge on private sources of funding for HR is the methodological problems encountered collecting such data. In addition to the lack of identified funders, and either primary or secondary data disaggregated for health, other complications include the frequency of conflicting or double-counted data regarding resource allocation according to different studies. An additional problem is the yearly oscillation of funding, rendering insufficient the use of short evaluation studies that acquire “snapshots” of the situation and fail to capture reliable information on ongoing trends, such as variations in public and private sector funding for HR. Another constraint to obtaining a clear picture of HR spending is the absence of specific studies in key areas: for example, resources used for HR by the Ministry of Health tend to be underestimated, or simply not counted in S&T spending records. Perhaps the main obstacle to clearly identifying the situation of HR financing in our Region is simply the low priority given by national S&T policymakers to monitoring HR resource flows.

While the significance of funding from the World Bank and IDB can be verified more accurately, it too is a complicated and time-consuming procedure. Information exists within the project agreements of the Banks, but data is dispersed within line items and among various expenditures of project loans to the health sector, and at times can only be found in individual country offices of the IDB rather than at headquarters.²

A clear-cut policy by the Banks regarding the allocation of HR funds and collection of specific information would help alleviate this problem by continuously monitoring HR funding data that is itemized and detailed according to each funded project. This would not only indicate funded activities, but also help countries determine levels and priority areas of funding for future development.

² A few additional resources dedicated to HR exist in IDB and World Bank loans to the S&T sector.
A study was undertaken by PAHO with the cooperation of the sectors of the Interamerican Development Bank concerned with health, to collect such information on HR funding in Latin America and the Caribbean. The study examined 27 IDB loan projects between 1992 and 1998, using a matrix to describe, for each project, the country, project title, description of the project, date of inception, total cost, and total spending on studies or research. The last component of the matrix, and the hardest to identify is the disaggregated spending for national and international consultants/researchers.

The study and research activities of the loan projects vary broadly, including themes such as pre-investment projects; institutional studies; epidemiologic research; studies related to legislative, normative, and economic contexts; ex-ante and ex-post evaluation of projects; diagnosis of the health situation; entomologic and parasitologic analysis; behavioral studies; as well as activities of human resources development for research.

Of the 27 projects, 23 were dedicated exclusively to health themes and 4 specifically to science and technology, but with a significant health component. Of the 23 health projects, 2 were regional efforts while the remaining projects were nationally directed, benefiting 18 countries: Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, Guatemala, Guyana, Honduras, Jamaica, Peru, Panama, Paraguay, Suriname, Trinidad & Tobago, Uruguay, and Venezuela. The Dominican Republic, Jamaica, and Brazil had two projects each.

Of all IDB health sector loans to individual countries, between 1992 and 1998, 6.7% of the amount spent were dedicated to research, totaling the significant sum of US$263,987,000. However, the amount of the research component varies enormously with the country, ranging from 0.05% to 100%. Brazil, with the largest loans, receives 23% of all loan resources dedicated to HR, while Argentina and Venezuela receive around 5% each. The three countries,
then, assume one-third of the resources spent on research/studies components of IDB loans, while producing around 70% of the HR in LAC.

IDB loans can comprise a significant source of spending in HR in relation to traditional state spending, and often is unreported. In both Brazil and Argentina, the HR component of just one IDB loan represents 1.1% of funding for all (not only health) R&D spending in each country. For smaller countries the amount is much more significant: 3.9% for Costa Rica, 4.2% for Bolivia and 13.7 to Panama. The Brazilian Research Council (CNPq) spends approximately US$100 million per year on HR, while the HR component for 1996 on an IDB loan to Brazil was worth US$60 million. IDB HR spending comprises 7.5% of all HR spending in Argentina and 40% in Brazil in 1996.

The relative significance of such loans emphasizes the need for more accurate accounting. In Panama, the official figures for R&D spending in HR was reported at US$3.6 million, but the figure obviously omitted an IDB loan dedicated to HR totaling US$4.2 million. This example, as do others, demonstrates how such underreporting can significantly alter our understanding of HR as a priority and as an investment, and diminish the potential for success in policy-making and planning.

The examinations of loan projects reveal another important aspect of IDB’s funding for HR, namely, the potential of Bank funding to contribute to the development of national investment. When funds are dedicated to national researchers, national capacity building is supported through human, institutional, and infrastructure development. In LAC, eighty-five percent of all IDB resources spent on health studies and research is dedicated to national consultants/researchers and the remainder finances international consultants;

---

3 Most of the research-related activities in this grant were epidemiological, institutional, economic, and legal studies as well as scientific meetings. See also PAHO/WHO, XXXIII Meeting of the Advisory Committee for Health Research of the Pan American Health Organization, June 1998, Caracas, Venezuela, p. 2.

but again, variation between countries is high. For instance, in Paraguay, none of the resources go to national consultants; in Belize, Honduras, and Guyana, national researchers capture 20% of the resources; and in the Dominican Republic, Guatemala, Jamaica, Colombia, Panama, Brazil, and Uruguay, 93% of the resources go to national consultants. Relatively large shares of funds allocated to national researchers generally indicate a higher level of national capacity; but in countries where national capacity is currently low, funds could also be dedicated to directly or indirectly develop national capacity through financial or human support. Furthermore, knowledge regarding these expenditures is useful for advocating for S&T policy.

The observations presented here are only a sampling of the richness of the information that could be made easily available through a reasonably simple and inexpensive monitoring process by the development banks. Additional studies are certainly needed to present a clearer picture, and negotiations are underway with the World Bank to conduct a similar analysis.

Another cooperative activity to promote HR funding is PAHO’s participation with the Global Forum for HR in an international effort to establish a permanent monitoring system for resource flows, which will present its first results next year. This initiative aims at examining the relationships between the so-called 10/90 gap, in which only 10% of the $50-60 billion spent worldwide for HR and development is used for research on the health problems of 90% of the world’s population. The main objective of the Global Forum for HR is to help correct the 10/90 disequilibrium and focus research efforts on the health problems of the poor by improving the allocation of research funds and by facilitating collaboration among partners both in the public and private sectors.5

2. Support for Resource Mobilization

---

In addition to monitoring resource flows, PAHO has actively promoted instruments to help researchers identify and use national and international funds available for HR. Most of the procedures used for disseminating information about funding sources for HR are neither sufficiently simple nor fast enough to respond adequately to the demands of health researchers. Currently, numerous scientific funding programs are inadequately utilized because the information is not being disseminated effectively.

In April 1998, PAHO’s Research Coordination Program held a workshop in Washington to discuss issues related to the situation and trends of financing sources for health research activities in Latin America and the Caribbean. This workshop was designed to develop strategies to identify existing funding sources, monitor resource flows, and stimulate alternative funding sources for HR, and participants focused on detailing the conditions necessary to allow researchers to identify and negotiate with HR funding sources. The resulting proposal was the development of an information system that would considerably diminish the time spent by health researchers in locating national and international funding by facilitating the management and dissemination of information on such opportunities.

2.1 Description of the Information System for Health Research Financing

The information system that was developed after the workshop, **OFIS** (Oportunidades de Financiamiento para la Investigación en Salud, or Opportunities for Health Research Financing) provides reliable, up-to-date information in a user-friendly manner, on the funding programs available in different countries. Its mission is to help health professionals enhance their fund-raising performance and increase their contribution to scientific knowledge. **OFIS** also helps policy-makers track national and international resource flows for HR, thereby providing support for advocating towards additional HR resources.
**OFIS** consists, in part, of a group of databases that contain information on public and private, national and international agencies that support research and human resources development in the area of HR. The system can be used directly by individual researchers, by policy-makers, by small work groups, or their institutions. A small staff continually monitors the information available on the Internet and in commercial data banks, selects the information related to each area of research or to specific projects requested by potential grant applicants, and sends them the information in the form of an alert which includes the terms and conditions of the financing opportunities. The staff continually fosters contact with funding sources to increase the potential for proposals to be approved and supported.

**OFIS** compiles a wide diversity of information on international collaborative mechanisms and funding resources available to the Region and among Latin American countries. The core data of the system comprises information from national and international agencies offering financial and other resources: grants, fellowships, training, international collaborative initiatives, technology transfer, services to Latin American researchers and graduate students in the health sciences, etc. The selection, analysis, codification and registration of data provides the system’s availability to all Latin American and Caribbean countries, and can be customized to user needs in each country. It runs online, using a Website and delivering specific information services to academic and research groups within individual countries. Following an ongoing evaluation and adjustment of the system for other environments, the project will be distributed and promoted in other Latin American and Caribbean countries.

Because of the remarkable diversity of sources available, data compilation is critical to the successful operation of **OFIS**. Input to the system will come mostly from primary sources, such as national and international funding agencies. Therefore, formal agreements with informants such as foundations, embassies, and government institutions are considered fundamental to guarantee the steady and up-to-date flow of data. Data from secondary sources, such as commercial
and free international databases of funding resources as well as Websites will also be included.

The search engine is simple, fast, and user-friendly. Its presence in the Internet enables the delivery of information to any new user who accesses it. The user can access the Thesaurus and relate a concept to key words simultaneously in Spanish and English. The system is composed of four principal components: (i) funding opportunities, (ii) researchers, (iii) institutions (research, funding agencies and government organizations), and (iv) research projects.

Figure 1. **OFIS entities**
Several interconnected databases will contain information on local, foreign, public and private agencies that offer support resources for HR and educational activities, as illustrated in Figure 1. An online service will be available on the OFIS website with selected information on fellowships and grants, listed by discipline and themes and available in the short and medium term. Information will be updated every two weeks. In an on-line bulletin board, users may announce, advertise, and offer or request information on funding opportunities, jobs, opportunities for collaboration, courses, internships, etc. Specific information packages will be delivered as a service to specific research groups.

Other features of OFIS include training workshops, organized in collaboration with the University of Texas, to diminish the knowledge gap in grant-writing and negotiating skills between researchers in the Region and those countries of the Organization of Economic Cooperation and Development (OECD). OFIS staff will constantly examine the different research programs being carried out in the Region, as well as the information needs of researchers. Currently, negotiations are underway to develop a partnership with SHARED, a
worldwide, interactive research projects database developed by the Dutch Research Council and the European Community.

2.2 Achievements

From the very beginning, this initiative was planned from a Regional perspective. The system is intended to be available to researchers eventually, in each country in the Region. However, HDR decided to start with pilot projects Chile, Cuba, and Mexico to allow for a preliminary assessment of its operation processes, impact, and usefulness. Results will be disseminated to institutions in other interested countries. The pilot projects were developed through CENIDS, the information center of the Health Secretary of Mexico; INFOMED, of the Ministry of Public Health of Cuba and the CIM (Center for Molecular Immunology); and the School of Medicine of the University of Chile.

Researchers in the pilot project countries have demonstrated great interest in HR resource mobilization, organizing several activities to discuss the issue and propose initiatives that address each country’s needs. In July 1998, for instance, the Ministry of Public Health (MINSAP) and PAHO’s representatives in Cuba organized a Workshop on Mobilization of Resources for the Funding of Scientific Research on Health, with broad participation of the authorities of the MINSAP, directors of research centers, and individual researchers. In this workshop, participants agreed that OFIS is a fundamental instrument for the mobilization of resources for HR in that country.

Of the three pilot projects, Mexico’s project, coordinated by CENIDS, has progressed most in accordance with the plan of work established in April 1998. CENIDS initiated a phase of surveys to identify the agencies that have information on resources of financing and of scientific cooperation for HR in Mexico. In order to learn more about the difficulties to obtain funding opportunities information in Mexico, CENIDS interviewed a group of researchers with knowledge and experience with identifying and managing research grants.
By examining existing mechanisms for information dissemination on research funding, CENIDS found that researchers receive the information in an inadequate and untimely manner. The Graduate Division of the Autonomous National University of Mexico (UNAM) became **OFIS-MEX**’s first partner, offering collaboration in the project, and requesting training of the researchers to use **OFIS**. Interviews were also conducted with officials in several national and foreign agencies devoted to HR financing and international cooperation. Agreements were made with the authorities of these agencies to establish future collaboration to feed, update, and maintain the information system.

The CENIDS and the Graduate Division of the UNAM, supported by HDR/PAHO, organized the **Workshop on Management for Financing of Health Research** in October 1998, that included experts from the University of Texas who coordinate fundraising activities for health. The objective of the workshop was to mobilize support for **OFIS** and to help design the system for Mexico.

A similar workshop was held on October in Cuba, with the participation of the same experts from the University of Texas. Following this seminar, PAHO facilitated an internship for the researcher who would be responsible for the organization of **OFIS** in Cuba, to study the Starline System at the University of Texas Medical Branch, on which the design for **OFIS** would be based. Chile held a similarly successful workshop last week.

In accordance with the plan of work established in last year’s workshop, representatives of CENIDS, BIREME, and PAHO’s Research Coordination Program developed the conceptual framework and data modeling necessary to design the prototype of **OFIS**’s basic software. The data modeling consisted of defining the attributes of each entity included in the information system. In November 1998, the Director of Systems of CENIDS designed the first prototype of **OFIS** software in Brazil, under the supervision of BIREME.
A workshop to evaluate the development of OFIS was held in Havana, Cuba in April 1999 to discuss the results of the studies on the situation and trends of the financing of HR in Brazil, Chile and Mexico, as well as the advances of the OFIS pilot projects in Chile, Cuba and Mexico. In Havana, representatives of the three countries and PAHO agreed on the prototype and timeframe to implement OFIS in each country. CENIDS and BIREME are currently undergoing tests, so far successfully, to evaluate prototype No.1. The results should help prepare Prototype No.2, to be jointly developed with INFOMED and the University of Chile, and tested before September 1999.

This year, institutions participating in the pilot projects are developing the infrastructure and courses necessary to implement the information system in Chile, Cuba, and Mexico for a 2 year period in which OFIS will be disseminated to other interested Latin American and Caribbean institutions.

OFIS will represent an important resource, not only by strengthening research activities in the Region, but also by promoting and increasing collaborative relationships among Latin American professionals and with other professionals worldwide.

While PAHO's technical cooperation activities creates powerful instruments for support of HR, the countries themselves have a fundamental responsibility to develop permanent mechanisms for monitoring resource flows as well as new sources for funding.

PAHO's efforts to promote OFIS and improve resource monitoring and mobilization in the Region can only advance with the firm support and active advocacy of the Advisory Committee of Health Research and the rest of the scientific community.