



Technical
Cooperation
among Countries
on Health
Sciences
Information



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Sciences Information**

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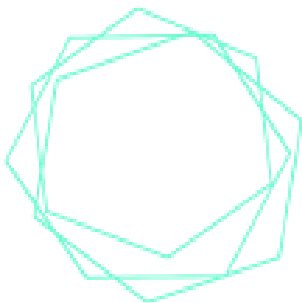
Cooperation. What for?

Speaking on the objectives, contents, mechanisms, and actors of the technical cooperation among countries on health science information is not a simple task, particularly at this important time of changes in the health sector with large impact for the area of health information.

The functions of health situation analysis and its trends, epidemiological and sanitary surveillance, regulation of the organization of care, etc., are collecting new emphasis as a consequence of the reform processes in progress both at the level of the State and of the sector. These are functions that generate strong demands of information for their fulfillment.

Similarly, the multiplicity of new public and private actors, including the population in general, involved in the activities of financing, administration, provision, and consumption of health services, also generate increasingly diversified demands for information. Undoubtedly, the production, collection, selection, analysis and dissemination of this information should occupy increasingly the cooperation agendas of agencies such as PAHO, and of technical cooperation among countries.

This is in some way one of the central subjects of the discussions this week. For that reason and due to my own limitations, I will not treat it as a whole, but concentrate on a particular aspect of this problem. I am referring to an aspect that, in my judgment, is one of the main if not the main problem that scientific health information faces: it concerns the divorce between the production of knowledge, on the one hand, and the utilization of this knowledge, on the other. It is the challenge of establish-



ing ties between the two, or, in a more general plan, the challenge of tightening the ties between science and society. With your permission, I will outline some ideas on this problem and the possibilities of overcoming it, pointing out the role of cooperation among countries and of domination and utilization of the new health information technologies.

The gap between knowledge and action is not a trivial problem. It has profound historical, conceptual, and institutional roots. With regard to the first, our scientific policy has been and continues to be influenced by the concepts developed in 1945 by Vannevar Bush, President Roosevelt's counselor for science, in his report "Science, the endless frontier" which inspired the creation of the U.S. National Science Foundation. The strict separation between basic and applied research adopted by the report—and subsequently endorsed by the conferences in Frascati, Italy—has generated an apparent or false conflict between investigating in order to understand (basic research), versus investigating to solve problems (applied research). Or, in other words, between the science that contributes to the expansion of the knowledge frontier versus the science that tries to solve the problems of society. This false alternative has created a competition between both types of research for the acquisition of resources. It has served, among other things, to justify the isolation of much of the scientific community from the rest of society, as it would not have to concern in relating its task with the social demands.

In addition to this distortion in the conceptual bases of the S&T policies, from the institutional standpoint it has never been possible to create, in the countries of Latin America and the Caribbean, true S&T systems. Despite the important strides made to develop a scientific infrastructure,

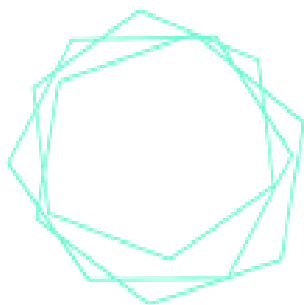


particularly since the 1970s, no organizational-institutional arrangements have been established to permit the free flow of knowledge and technologies among the entities that produce them and the ones that use them. Efforts were concentrated almost exclusively in the offer, that is, support to groups and research projects, as if produced knowledge would be transferred automatically to those who could use it. In addition to that, efforts to develop a scientific and technical infrastructure were made in models of low competitive development, that slightly stimulated innovation and hindered the establishment of strategic alliances between countries for technical cooperation and the solution of common problems.

Favorable conditions

Currently, we observe a series of trends that, although in many cases are incipient, open new prospects for overcoming the aforementioned problems. The challenge is in how to strengthen them and take advantage of the possibilities they offer both for planning scientific activities most closely linked to the social needs, and for a better and broader access to the results.

In the first place, Bush's paradigm for the definition of scientific policies, based on the separation more or less rigid between knowing and using, and between what is basic and what is applied, is being replaced with a concept much closer to the concrete practice of research. That is the concept of strategic research, that is research seeking at the same time to expand the borders of knowledge and to solve concrete problems. Examples of this type of research abound in the history of science, from the



works of Pasteur, to more recently, the progress in immunology, molecular, or genetic biology to solve problems such as cancer, AIDS and others. The challenge for the planners and decision makers in science is such as abandoning the old schemes of resources allocation according to basic or applied research to concentrate them on those areas that make it possible to combine the intrinsic development of scientific enterprises with the social demands.

Another positive trend, now in an organizational-institutional plan, is the emergence of other actors in the planning, financing and execution of S&T activities—until not long ago practically an exclusive responsibility of the State, which had the researchers as its sole interlocutor. The trend towards diversifying the institutions that finance and execute the research activities, together with the claims for more social control over science to curtail the excessive control autonomy it holds, may help break the isolation of the S&T sector and bring it closer to the rest of society. In addition, internationally, S&T activities have been playing an increasingly central role in the cooperation agreements. It is fit to foresee that, with the development of these agreements in our Region, this will also occur in the health sector, particularly, where internationalization and complexity of the problems makes it impossible for any country, no matter how developed, to solve them individually.

Finally, another positive trend for closeness between production of knowledge and the social needs, at national and international levels, is the development of health information technologies, particularly, the organizational technologies to form collaborative networks as well as those related to the development of information science and communication. The

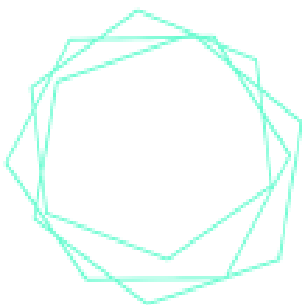


Latin American and Caribbean Health Sciences Information System and the Virtual Health Library are examples of these technologies adapted to our reality that, added to previous trends, open enormous possibilities to overcome the problems being discussed.

How to take advantage of these favorable conditions

As previously mentioned, these positive trends in many cases are just being outlined and it is necessary to widen the spaces being opened.

A first dimension of work in this regard is of a political-institutional nature, and it refers to the establishment of mechanisms of participation and communication to strengthen the ties between scientific activity and society in general. For this purpose, we must take advantage of the greater diversity of S&T actors and of the movement for a greater social control of science. This will create opportunities for discussion and consensus that will allow the S&T policies to be consolidated as public policies and submitted to public debate. The State should fulfill an essential role in this regard, establishing the spaces, incentives, channels, that is, the “rules of the game” for a broad participation in the definition of the direction to follow.



Another aspect is the creation of structures and mechanisms to strengthening the ties between research and other social sectors. There is a need for studies to learn in more systematic ways which are the barriers and the

facilitating factors in the relationship among producers of goods and services and the research institutions, as well as between these and the decision makers on social and health policies. However, we already have some information and experiences that may assist us in the creation of these structures. These are the structures and mechanisms that may facilitate the transfer of technology to the productive sectors; that may translate the results of research for a broader dissemination; and that may promote the creation of incentive systems to make the researchers be concerned with the utilization of their findings, etc.

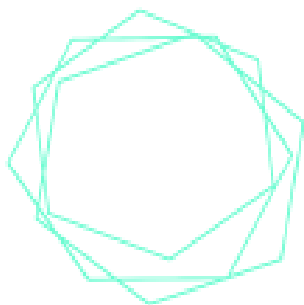
These lines of work placed in a dimension of political-institutional development should be founded by a technical basis, and it is in this space that I intend to share with you some ideas. Access to the information is an indispensable requirement so that the various actors involved or potentially involved in activities of S&T in health (S&T planners and administrators, researchers in different disciplines, entrepreneurs, decision makers, health professionals and the general public) may actually participate in the decisions concerning S&T, and take advantage of its benefits. In order to reach each one of these actors it is necessary to know the sources of information that they rely in, what type of information they are interested in, how they evaluate the information, which are their motivations, etc. The Virtual Health Library (VHL) creates a platform of broad and unrestricted access where any type of information may be included and where the users have total autonomy to command the search as per their needs and interests. This creates great opportunities, but also represents a great challenge in the sense of enhancing the type and quality of the information.



Having as a reference the objective of promoting and strengthening strategic research, that is, that which allows to combine the needs for intrinsic science development with the attention to social demands. Or as Stokes well says, “to combine the research seeds with societal needs”, we need basically two large types of information: first, the ones regarding health situation with the knowledge demands it generates, and second, the ones referring to scientific output, its trends, and capacity of response to these demands.

Regarding the demand, or social-needs, in spite of the Region’s long experience in collecting mortality data, we are still very far from having data to enable us to account for the complexity of the health situation and health care in the Region. We have very little reliable information on morbidity, as well as on structure, financing, care quality and outcomes of the health systems. Even in the case of mortality data, its aggregation level does not allow a more precise analysis of situation and trends for the identification of inequities or specific groups problems by occupation, social class, gender or ethnic group.

However, there are some examples of new developments that should allow a more precise description of the health situation, such as, the proliferation and enhancement of health situation surveys and living conditions; the dissemination of the use of geographic information systems; the design and enhancement of indicators that enables to evaluate years-of-life-lost by death and by disability, etc. These developments, associated to those being observed in the methodologies of definition of research priorities, will permit a clearer identification of the problems, and of the knowledge demands.



With regard to the data, indicators, and studies to evaluate the response capacity of the scientific infrastructure to these demands, or the “seeds” of science, we are in a more precarious situation. Possibly this occurs because for a long time no one has been concerned about having information on the relevance, the quality, and the impact of the scientific output. The first to be interested in measuring and evaluating the scientific output were the Science sociologists and historians early in the 1960s, and only by the middle of the following decade, the planners became interested. Until then, the S&T planning processes were based almost exclusively on the opinion of experts.

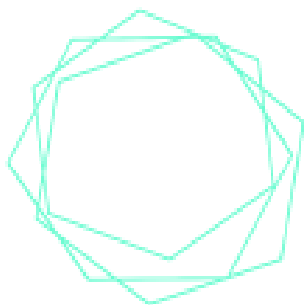


I should not extend in relating the difficulties and deficiencies of the databases on scientific and technical potential and on the scientific output of the Latin American and Caribbean countries. You know more than I do on this subject. We all know of the high costs, fast obsolescence, and low coverage of the surveys that are made to researchers, research institutions, and financing agencies in order to obtain data on human, financial, and materials resources, projects in progress, publications, etc. With regard to databases on formal scientific publications, the advances achieved with LILACS are extraordinary, but the studies on production and scientific productivity in our Region are almost all made from international databases, particularly that of the Institute for Scientific Information (ISI). We know that this base is not appropriate to analyze science in the developing countries and much less to make decisions on scientific policy. Since it is limited to articles published by authors from these countries in the most important journals in the developed world; therefore, it does not allow an inventory of the scientific output of the countries considered.

The indicators used to analyze the scientific and technical activity in our countries continue to be limited to indicators of inputs and of products. We do not have adequate impact indicators and those of products usually are still limited to the scientific article published in a mainstream journal. We do not have analysis parameters, that is, optimal criteria for production and productivity, and because of that our studies on scientific production are restricted to comparisons between countries without taking into account the different cultures in terms of publications. When areas and types of research are compared, the different publication patterns among them are not taken into account either.

As you can see, the data, indicators, and types of studies conducted on the scientific activity in our countries contribute very little to evaluate the true potential for response to the identified problems. For that, we need, among other things, new methodological developments that, combining qualitative and quantitative approaches, permit a better comprehension of the nature and characteristics of science in the developing countries. We need also to improve the local databases and create new indicators to answer well-defined questions and to recognize the specificities of science in our countries.

In conclusion, the task of improving the data, indicators, and methodologies of analysis, both of health situation and scientific activity, in order to allow greater relevance and quality to health research and a better use of its fruits, is quite complex. However, as seen, there are a series of elements in the context that create favorable conditions to face this task, which necessarily implies an effort of interdisciplinary work. Hardly can an institution or a country face it individually, this creates broad spaces for tech-



nical cooperation development in this field. Another favorable element is the consolidation of the Latin American and Caribbean System on Health Sciences Information, which represents an important institutional infrastructure for facilitating this cooperation, particularly, with respect to management of the health information methodologies and technologies, where today the proposal of the Virtual Health Library is highlighted. We are aware that several actions in this regard are in progress, and despite all its limitations, the Research Coordination of the Division of Health and Human Development of PAHO/WHO is willing to associate itself with this effort. The challenge is big but there are many reasons to be optimistic.

Thank you very much.