The Need to Know
by Dr. José R. Ferreira

Improving the health of the population as a whole requires the delivery of services based on mastery of already available knowledge, whether scientific and technical or political, social, and economic. This statement is necessarily broad because of the complexity represented by the multiple efforts of research, dissemination, and transmission of knowledge, a process which, in the health context, has been called "information management".

Outcomes and Research

The information management process requires countries to take charge, first of all, of diagnosing their own situation and organizing to improve their information systems and their capacity for analysis in overall socio-economic terms, as well as in relation to health care in particular. More specifically, there is a need to strengthen capacity in the areas of analysis of national policy and the financial sector and to probe in depth the factors promoting efficiency and efficacy in health interventions in order to better serve the whole population.

Other priorities include biomedicai research related to hygiene and public health, as well as studies on nutrition, infectious diseases, environmental protection, and the problems of high risk groups, such as children, women of childbearing age, workers, and the elderly. Research in the area of child survival is another priority.

Efforts so far have come out of the universities and national research institutes charged with fostering scientific development. The Pan American Health Organization (PAHO)—the regional office of the World Health Organization (WHO)—has pulled together all these initiatives, supporting national institutions and projects in specific fields and developing such multinational centers as the Institute of Nutrition of Central America and Panama located in Guatemala, the Caribbean Food and Nutrition Institute in Jamaica, the Pan American Foot and Mouth Disease Center in Rio de Janeiro, the Pan American Zoonosis Center in Buenos Aires, the Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS) in Lima, the Latin American Center of Perinatology in Montevideo, and the Caribbean Epidemiological Center in Port of Spain.

The Organization's efforts have been concerned mainly with carrying out research, as well as lending support to particular projects and training specialized personnel, including strengthening the capacity to stimulate development of new knowledge and critically analyze it, always with reference to the actual situation of the country involved. A case in point is the current effort to foster countries' capacities to evaluate new technologies applicable to health care and therapy which are sometimes of disputable value, contributing unnecessarily to the high cost of health care.

Data Collection and Dissemination

These provisos notwithstanding, essential health information, whether produced in more developed or developing countries, will be useful only to the extent that there are adequate mechanisms for its documentation and dissemination. With exponential growth in the order of 6 to 7 per cent per year, the body of biomedical and health literature and data will double every 10 or 15 years, providing an immense challenge in terms of information management.

The United States, through the National Library of Medicine, has made a landmark contribution in bringing together the largest collection of medical literature in the world and developing an efficient reference system, the Index Medicus. In addition, through the application of modern technology, it has created MEDLARS, a computerized system for analyzing and retrieving the entire biomedical bibliography.

PAHO, with the support of that library and national libraries, has been able to establish a Regional Library of Medicine (BIREME), designed to serve all of Latin America, and located in São Paulo. This library, by incorporating the same computerization system, was able to develop a Latin American Index Medicus and create an information network with more than 400 participating libraries. In addition, two specialized information systems have been created: the Pan American Network of Sanitary Engineering and Environmental Science Information and Documentation, headquartered at CEPIS in Peru, which represents about 200 centers, and the Latin American Cancer Research Project (LACRIP), an international computer network concerned with collecting and disseminating up-to-date information on cancer.

So far these technologies, which permit on-line utilization of international data banks, are accessible only through satellite telecommunications networks, such as is the case with LACRIP, which usually involves considerable cost. The Organization is working on an alternative which will initially rely on the facilities of BIREME and CEPIS, eventually going to other general information sources. The new system uses compact video disks hooked up to a personal computer to gather and manipulate large volumes of information and disseminate it cost-effectively throughout the affiliated network. This system
A network consisting of more than 1,500 Latin American institutions helps the countries carry out training programs, such as this laboratory course in Trinidad and Tobago.

PAHO/WHO Photo by Julio Vizcarr

also offers the advantage of large capacity, since each compact disk may contain the equivalent of one thousand books of 200 pages each. This mechanism is designed to open access to sources of knowledge, not only to the health library network, but also at the level of health services and, eventually, to the professional caregiver.

In order to facilitate the exchange of information between countries, the language barrier must be overcome. To deal with this situation, PAHO came up with another innovative initiative to promote the development of a computerized English/Spanish translation system. The process, now in full operation, overcame the dilemma of different interpretations by incorporating a dictionary of phrases which shows the multiple meanings of each word.

Transmission and Training

The creation of effective information management mechanisms allows the possibility of further transmission of this knowledge and of stepped-up staff training efforts. A network has been formed consisting of more than 1,500 Latin American institutions engaged in training programs for 100,000 specialized personnel each year in various health fields. The Organization’s efforts range from the promotion of human resource planning and surveys of the health care job market to setting standards of operation for the training network as a whole and lending institutional and program support. The focus has been on promoting the design and establishment of

new educational centers, the revision and upgrading of professional courses of study, faculty training, and methods development, along with the collection, production, and distribution of educational material. Professional training is being reorganized according to the goal of Health for All by the Year 2000, with an emphasis on the expansion of primary health care.

Regarding this educational effort, it should be pointed out that the public health training approach has been adopted by 24 US and 13 Latin American schools of public health, in addition to 16 graduate programs in community and social medicine, as well as several short-term core courses and specialized residencies in health administration. More recently, in Latin America a series of ten Regional Programs of Animal Health Training have been established which combine the resources of public health training centers with those of health care training facilities, reinforcing their strategic planning component.

Most of these programs, mindful of the commitment to Health for All, have stressed the need to reorganize health delivery systems as well as leadership and advanced training in order to strengthen the decision-making process. Special emphasis has been placed on what has been called “the multidimensional focus of epidemiology”, which covers not only traditional monitoring and control of infectious diseases, but also everything relative to health analysis and evaluation of health services to serve as a basis for health planning and monitoring in all aspects of disease control, both acute and chronic, infectious and degenerative.

In this advanced formulation, it is important also to elaborate on interdisciplinary relationships in order to treat health within its broader social context, considering the implications for other fields in terms of responsibilities and outcomes. Therefore, all aspects need to be considered: educational, administrative, legal, economic, and political to assure future leaders the knowledge they need to enlarge the dialogue in favor of health development, reduction of dependency, and promotion of an attitude of confidence and determination to move ahead.

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