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Epidemiology and Health Services Management

Gilles Dussault
Department of Health Administration
School of Medicine, University of Montreal
Quebec, Canada

The usefulness of epidemiology for the decision-making process in the organization and management of health services is easy to demonstrate. In that the ultimate objective of health services is to address the real needs of a population, epidemiology and management are partners, logical allies. Decisions on resource allocation and on the definition of priorities and objectives, cannot be made without a data basis in order to identify problems and their pattern of distribution in the target population.

The problem of the relation between epidemiology and management does not arise in justifying the utility of epidemiology, but in understanding why administrators fail to use it and how one may foster more appropriate use of its potential. For example, in Quebec, where a public, universal, and free system of health services has been in place since the beginning of the 1970s, the first general health study, which was meant to obtain a profile of the state of health of the entire population, was not carried out until 1987-1988 and was then repeated in 1992- 1993. That work, which is of excellent quality, produced very important data for the orientation of public policies. For the previous 20 years, administrators and political leaders took strategic and operational decisions based only on health data provided by the census, mortality records, the use of services (which gives only part of the picture), and the few studies available on specific populations and problems. This means that decisions were made without a clear and valid idea of the real picture of the health of the population.

1. The Necessary Contribution of Epidemiology to Health Services Management

Epidemiology is universally recognized for its fundamental contribution to the identification of health problems, to the understanding of their etiology, and to the knowledge of the dynamics of the distribution of health problems in a population. Its limited contribution to the management of services is also recognized. Pressures to change this situation have been growing in several areas:

a) Increasingly, countries of the Americas try to define health policies and not just service policies. In other words, policies are being defined according to goals that are formulated in terms of health indicators (including quality of life indicators) that must be achieved; policies are no longer simply defined in terms of services to be offered and resources mobilized. The objective of such policies is to have a measurable impact on the health of a given population. This is a very different objective than trying to meet people's spontaneous demands.

Such policies require reliable and pertinent data to be available on the initial situation and acceptable criteria to be set for priorities, among which one of the most fundamental is to have valid intervention

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strategies. Epidemiology can help to validly describe and explain the state of health and monitor the evolution of problems. It can also contribute to an evaluation of the responsiveness of different intervention options through evaluation studies.

The epidemiology that I am describing is one which extends beyond the traditional study of biological variables in order to consider the role, now recognized as determinant, of sociocultural variables. One cannot understand the clinical and demographic effectiveness of interventions, which are rarely measured under the most realistic experimental conditions, without taking into account the psychological, social, and cultural dimensions involved. Anthropologists and sociologists have demonstrated, without resorting to quantitative methods, the central role of cultural representations of health and in the face of disease, in the shaping of the relation between therapists, services, and the patient and its outcomes.

Management oriented toward improving health indicators tends to generate an organization of services that no longer are provided on the basis of types of establishments and professional divisions of labor. That traditional pattern is being replaced by an organization structured around programs; that is, one with specific goals, such as to address a given problem (e.g., mental problems, traffic accidents, work accidents, or sexually transmitted diseases). This type of management requires continuous access to valid epidemiological data in order to monitor the effect of the health measures that the program promotes and to adjust it as required.

b) Processes of regional and municipal decentralization and local health systems development favor the population (as opposed to individual) approach to health problems. The institutional and professional approaches which focus on the individual may function without the contribution of epidemiological data (it is enough to anticipate the demand or, eventually, to foster it), but the population approach requires such data. Its aims are expressed in terms of indicators that need to be changed. Without the contribution of epidemiological data on the evolution of the state of health, there would be no populatiom approach, unless we wish to consider the impressions of managers, professionals, or representatives of the population as sufficiently reliable and valid sources of data on health conditions.

c) The search for a more equitable distribution of the resources available for health services also requires an epidemiological contribution at two levels at least :

- identification of differences in epidemiological profiles of different regions and population groups, which is required because equity implies a needs-based resource allocation; and
- evaluation of the impact of different intervention options in order to avoid wasting limited resources.

If each disbursement represents an opportunity cost (its equivalent in other disbursements forgone), valid data on the relative effectiveness of decision options is essential for the decision-making process, even at the level of micro decisions (e.g., to prescribe a drug, to order a test, to admit a patient). Data on variations in medical practice which are growing in number and quality--cannot be ruled out simply on the argument that no two patients are the same or because the circumstances of practice have divergent characteristics. Such a position would be tantamount to accepting that all physicians are always right. Physicians and other health professionals need to the rigorous analysis those data in order to determine which variations are acceptable and which should be eliminated. Every time a cesarean section, bypass, prostatectomy, or tonsillectomy is needlessly performed, resources are diverted from needs for which effective interventions often exist; in the context of publicly financed health services, this is not ethically acceptable.

This position is idealistic; to promote the search for maximum compatibility between interventions and resource allocations in terms of needs, effectiveness, and efficiency. It is not, however, utopian, because we already have the technical capability to bring us closer to the ideal. Our problem is that we do not utilize this capability. Why?

2. The Gap Between the Potential and the Actual Practice in the Relationship Between Epidemiology and Management

There are two main reasons for the gap between epidemiology and management: First, the political will to implement a health policy to reduce needs may not always exist. Second, epidemiologists and managers are responsible for the lack of dialogue: epidemiologists, because they are enveloped in a world insulated from the demands placed on

services; and managers, because they cannot define their information needs, whether due to ignorance of epidemiology or to a lack of concern for the impact of their decisions on populations.

a) There are few instances in which governments have adopted a true health policy and have the authentic will to apply it. It is still rare for planning to be based on goals formulated in terms of health indicators, and rarer still to find coherence between organizational strategies and those goals. For example, in the United States, one observes the greatest effort to define "health objectives" based on the results of sophisticated research; however, health sector policies are scarcely coordinated with these objectives. Service organization and management have little to do with general goals. In Quebec, a health policy was defined in 1992, after the government passed a law reforming the organization of services.

This neatly illustrates that decisions related to resource allocation may be influenced by factors unrelated to needs. There are economic factors tied to the interests of equipment manufacturers and producers of other inputs, pharmaceutical, insurance, and construction companies, consulting firms, and obviously, politicians. Technical decision criteria--among which epidemiological criteria would be the most important -- play a more significant role when there is a true commitment from decision- makers to the objective of changing health conditions. Without this prerequisite, the notion that epidemiology will have an important impact on decisions is mere wishful thinking. In addition to producing pertinent data, epidemiologists should participate in the movement that sets as a major social priority the promotion of improvement in health conditions.

Even when the political will exists to implement a health policy, clear goals cannot always be defined because of a lack of information. For example, in Quebec, health policy is articulated in terms of biophysical problems such as cancer (to reduce mortality from breast cancer by 15% within 10 years) or respiratory problems (to reduce mortality by 10% within 10 years). In the area of mental or social problems, it is much more difficult to define goals: for example, one of the 19 objectives is "to reduce mental problems within 10 years" and another is "within 10 years, to reduce the number of cases of sexual abuse, violence, and neglect that children suffer and diminish the consequences of these problems." For both cases this will be difficult to assess since our knowledge of the amplitude of these problems is based on the cases known to the health services rather than on their distribution in the general population.

b) Despite the fact that circumstances do not always favor the best use of epidemiology in service management, one must admit that the behavior of epidemiologists themselves does not always promote demand for their contribution. Managers are also responsible for the under-utilization of epidemiology in management. Both have different, but not necessarily divergent visions, of what is "good information." Epidemiologists are concerned with problems related to the validity of numerators and denominators, the credibility of data collection tools, and the scientific quality of analyses. This is normal and desirable. Many in the profession are more comfortable with variables that lend themselves well to quantitative measurements, and so they tend to reduce health problems to their biophysical dimensions. That current of epidemiology, which is more prevalent in countries of the North, tends to give short shrift to the health perspective and the qualitative methods of the social sciences. "Hard" epidemiologists, who only see disease as the manifestation of a difference between an observed situation and professionally defined norms, easily dismiss the opinion of sociologists and anthropologists that health and disease are cultural products (products of representations) rather than having only a biophysical basis. Epidemiological development has been occurring more in relation to academic criteria than to the needs of service systems.

In Latin America, it would seem that historically, epidemiology was more concerned with the sociocultural aspects of health problems. But my impression is that the field has had little contact with health services management.

The result is that if epidemiologists were to assume responsibility for management they might be astonished to discover the differences between

the type of information that they need to make management decisions and the information that they actually produce.

On the other hand, one finds scant familiarity among managers with the contributions that epidemiology can make to management. In North America, the great majority of managers are not physicians and know little about the potential contributions of epidemiology. (This does not mean that physicians in management are very much different.) For example, The Journal of Health Administration Education, one of the most respected in the field of health administration training, published an edition at the end of 1993 devoted to the subject of "Epidemiology and Management" which includes articles that introduce this topic with classical definitions of epidemiology and even of such elementary concepts as incidence and prevalence. It is a little frightening to see that the editors of that journal, even today, would consider these definitions to be needed in order to understand the contents.

For managers, useful information is that which covers the population served and is quickly accessible, easy to interpret, and inexpensive. Managers have little awareness of the difficulties that hamper or often prevent the production of such data. They have a more institutional than populational perspective, which explains their limited interest in epidemiological data. Consequently, epidemiologists have an educational task to fulfill. They need to explain the limits of what is possible, the problems of incompatibility among data sources[1], validity requirements, and methodological difficulties in measuring certain variables.

Municipal and regional decentralization favors the horizontal and vertical integration of institutions that provide services (an integration that requires a very strong political commitment). As resource allocation are linked to the distribution of needs among the population, managers will begin to become concerned about health information and to voice demands for epidemiological expertise. Consequently, they will not be satisfied with traditional indicators; they will also want information on problems that epidemiologists disregard: mental and social problems, family and urban violence, drug abuse, and the effectiveness of intervention options. Managers have the responsibility to better define their needs and explain to epidemiologists the role that socio-health information plays in the decision-making process. For their part, epidemiologists should be prepared to respond to these requirements if they want to maintain their professional standing.

3. How Can Epidemiology and Management Be Brought Closer Together?

Decisions in the health sector are being based on numerous factors, such as the requirements and preferences of users, professionals, and managers (not necessarily in this order). Furthermore, other factors come into play such as political and economic interests, power relationships among participants in the decision-making process, the costs and availability of resources, perceived needs, and measures. Our concern is to conceive strategies to broaden the relative contribution of health and social data to decision-making.

The greatest incentive would be for resource allocations to be guided by the achievement of results in health indicators; in other words, to formulate service and health resource policies subordinated to health goals. Such a proposal could be considered idealistic: in reality, it requires a political commitment, which exists in few countries, in favor of improving the state of health of the population. It requires political will and ability to cope with the economic and professional interests that benefit from current resources generally earmarked for hospital services and drugs.

Quebec's attempts to guide resource allocations in this way are recent, but they demonstrate that actors in the health service system have quickly appreciated the need for epidemiological data in order to justify their resource requirements. Professionals and managers are seeking relevant data, now that they understand that the rules of the game require documentation of the need for, and utility (relevance) of, proposed health services.

It would be most helpful to strengthen the education of management in the field of epidemiology and that of epidemiologists in the field of management. Administrators should know the language of epidemiology, how it works, and what its limitations are. The mistake that must be avoided is to teach epidemiology to managers as if they were to be trained to become epidemiologists. Epidemiology should be taught, instead, as a management tool, as a decision-making aid. It should foster managers' adoption of a population approach

to health needs, and it should provide strategies for identifying those needs. On the other hand, epidemiologists should be sensitive to management needs and produce pertinent and useful data, presented in a form that increases the likelihood of it being used. Therefore, they should learn to communicate information.

Epidemiologists and managers could review together the following questions: 1) Which data are most likely to produce variations or induce changes in decisions? The response would make it possible to identify priorities in data collection; 2) What would be the "minimum package" of essential data for each decision-making level (institutional, local, regional, national)? The examination of these questions could help in the process of raising the mutual awareness needed to guarantee greater and better use of epidemiology in management, as well as promote a more effective use of available resources for the collection, analysis, and dissemination of data.

To my mind, the current problem is not one of scarcity of resources, but the poor utilization of resources. Managers complain that they do not have access to data they would like to use and that the data they do receive are not relevant. This characterization may be a bit overstated, but it does reflect the differences in perception between administrators and epidemiologists over what is relevant. Inclusion of epidemiologists on management teams can contribute a great deal to the process of defining the needs, priorities, and strategies of intervention and evaluation. Such a proposal does not mean that epidemiologists should be subordinated to management requirements and act only as data-supply technicians. Epidemiology should conserve its role of critical analysis of policies and decisions in the health sector; managers would also benefit from recognizing the role that should be fulfilled in evaluation activities.

Conclusion

Epidemiology is not, nor will it become, a substitute for decision-making. Its role is to introduce more rationality into the process. It has numerous potential areas of influence: 1) in public health policies, helping to define priorities, objectives, and strategies; 2) in the reconfiguration of services, examining the consequences of decentralization, out-patient surgery, reducing admissions, and integrating services into programs; 3) in the professional practices, studying variations in effectiveness and efficiency; 4) in management practices; and 5) in research priorities. These contributions are necessary both in the context of declining available resources, characteristic of rich countries, as well as in the context of increasing investments in the health sector, which is occurring in the Latin American countries that have been controlling inflation and have undergone growth. Consequently, the challenge for both epidemiologists and administrators is to achieve the type of alliance that produces policies and strategies that have a greater impact on the well-being of populations.

[1] In an opinion poll, requested by the Ministry of Health and Social Services of Quebec, carried out in late 1994, 51ices of Quebec, 51 percent of the interviewees (managers of hospitals and health centers) did not know of the majority of existing databases. Perhaps epidemiologists should make it their priority to disseminate information on available databases.

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Health Conditions in the Americas, 1994

Since 1954, PAHO has published quadrennial reports that document the changes and advances in health in the Americas. The following article summarizes some of the most prominent elements of Health Conditions in the Americas, 1994 Edition.

Over the past few decades the Region of the Americas has undergone major changes which have had repercussions on the health situation of its populations.

In Latin America and the Caribbean, life expectancy rose from 57 years in the early 1960s, to 61, 65, and 68 years in the early 1970s, 1980s, and 1990s, respectively. This increase was largely due to a reduction in infant mortality from 127 per 1,000 live births in the early 1950s to 47 per 1,000 live births in the 1990s. Large differences remain among countries, but the general trend has been toward lower infant mortality.

The total fertility rate--the number of children borne on average by a woman throughout her reproductive life--has been halved over the past 30 years in Latin America and the Caribbean, falling from 6 children per woman in the early 1960s to 5 and 4 in the 1990s and 1980s respectively. It was estimated at 3 children per woman in the early 1990s.

The population in the Region of the Americas is aging, as is the case at the global level . The age group 65 years and over grew in both percentage terms, from 6% to 12%, as well as in absolute terms, tripling between 1950 and 1995. In the Region as a whole, this population group increased by 220% between 1950 and 1995 (from 19 to 61 million); and in Latin America and the Caribbean alone, the increase was 340% (from 5.6 to 24.6 million) for the same period. This age group has grown at an annual rate of 3.3% since 1950, while that of population under 15 years of age has decreased.

Malnutrition continues to be an important problem. The population in several countries does not consume the minimum daily protein and calorie requirements, and suffers from nutritional deficiencies in iodine and iron. This situation is reflected in the fact that in 12 of 20 Latin American countries with data available, more than 10% of newborns have low birthweights.

Diseases preventable by immunization have continued to decline. The number of cases of poliomyelitis fell from 4,000 annual, in the late 1970s to 500 in 1984 and 1 case in 1991. For the first time in history, a region--the Americas--has been declared free of transmission of indigenous wild poliovirus. Measles cases have also declined, from 200,000 cases in 1984, to 100,000 in 1992, 50,000 in 1993, and 23,000 in 1994. Cases of whooping cough declined by 88% between 1980 and 1992. The elimination of measles is the next challenge that countries in the Region are facing.

The re-emergence of cholera after almost a century has been one of the most significant public health events since 1991. After its appearance in Peru, almost 400,000 cases and 4,000 deaths were reported throughout the Region in 1991, 350,000 cases with 2,400 deaths in 1992, 200,000 cases with 2,300 deaths in 1993, and 110,000 cases with 1,200 deaths in 1994. Although the number of cases has been diminishing gradually, outbreaks persist. The measures adopted to deal with this epidemic, including those related to the organization of the health services and public awareness campaigns, as well as the attitudinal changes in the population with regard to hygiene and food preparation, have had a positive impact, reducing mortality from diarrheal disease among children under 5 years of age in Latin America and the Caribbean. From 1985 to 1990, the average number of deaths from diarrheal disease in this age group was 130,000 annually; for 1992-1994, the figure was 90,000.

Malaria remains a significant health problem, with slightly over 1 million cases a year; its incidence has not fallen. Transmission of the disease in the Americas occurs in 21 countries with a combined population of 210 million living in malarious areas. Dengue continues on the rise, from 47,000 cases in 1990 to 62,000 in 1993; 3,900 of the cases in 1993 were hemorrhagic, resulting in 24 deaths. Preliminary data for 1994 indicate that 137,000 cases of dengue occurred, 1,700 of which were hemorrhagic, with 26 deaths. Countries that had previously been free of this disease, such as Costa Rica and Panama, were the last to be added to the list of affected countries.

In Latin America, some 230,000 annual cases of tuberculosis in all its forms are reported yearly, although the true annual incidence may reach some 500,000 cases. In most Latin American countries, the incidence rates reported represent from 40% to 70% of estimated total TB control program. This situation has been aggravated by the spread of HIV infection. PAHO estimates that some 1.5 million people are infected with HIV in Latin America and close to 117 million are infected with *M. tuberculosis*. By 1992, it is estimated that a total of 330,000 people in Latin America and the Caribbean were infected with both HIV and *M. tuberculosis*.

The current estimate is that over 2.5 million people in the Americas are HIV-infected (around 1 million in North America and 1.5 million in Latin America and the Caribbean). By March 1995, a total of 573,000 cases of AIDS and 302,000 deaths had been reported (113,000 in Latin America and 54,000 in the Caribbean; the remainder in North America, primarily the United States).

Prominent among the emerging diseases are Hantavirus pulmonary syndrome in the United States, epidemic neuropathy in Cuba, and Venezuelan hemorrhagic fever.

In 1990, accidents and violence accounted for 21% of the total disability-adjusted life years lost among men and 8% among women, versus 15% for men and 8% for women worldwide. Although there is no homogeneous trend with respect to specific causes within this cause group, some are often predominant such as homicides in Colombia, for example and motor vehicle accidents. What indeed appears constant is the increase in urban violence. Rapid urbanization, unemployment, insecurity, great socioeconomic inequality, consumption of drugs, and alcoholism are among the factors underlying the increase in accidents and interpersonal violence. Violence is perhaps one of the greatest challenges to modern society.

In 1990, cardiovascular diseases were the leading cause of death in Latin America and the Caribbean, accounting for 25% (800,000) of total deaths. In Canada and the United States, the proportion approached 50%. Prominent among these diseases are ischemic heart disease, cerebrovascular disease, hypertensive disease, and chronic rheumatic heart disease. The highest mortality from cardiovascular diseases in both sexes was found in some of the English-speaking countries of the Caribbean, in North America, and in the Southern Cone. The lowest rates were in Mexico and Central America.

There was an average of 900,000 annual deaths from malignant neoplasms in the Region during the period 1985-1989 (540,000 in North America and 360,000 in Latin America), representing 16.7% of the 5.4 million deaths from all causes (23.2% in North America and 11.7% in Latin America and the Caribbean). The proportion of deaths from tumors of the various sites varies from country to country and, to a lesser extent, by sex. Cancer of the stomach is significant in most developing countries of the Region, and presents in higher rates for males. The highest female breast cancer rates are found in Canada and the United States, although they are also relatively high in Argentina, Cuba, Trinidad and Tobago, and Uruguay, and the rates from this disease has been on the rise in almost every country. The proportion of deaths from cervical cancer is low in Canada and the United States; however, it is responsible for 20,000 to 30,000 deaths in the Region annually, accounting for 10%-15% of cancer mortality in women. Another important fact is the high number of deaths from respiratory cancer

(trachea, bronchus, and lung) in both sexes in Canada and the United States, with mortality being higher among men. Deaths attributable to tobacco in Canada exceeded 38,000 in 1989 and represented 20% of all mortality.

Health promotion and protection activities have increased. Educational campaigns focusing on the dangers of tobacco use, the need for a healthy diet, controlling hypertension, safe sexual practices, etc. are among the preventive efforts that are addressing health problems of growing importance.

The panorama of the social response to health problems is a complex one. Several elements of this response are mentioned below.

In 1994, vaccine coverage in most countries exceeded 80% for poliomyelitis, measles, and DPT. Of 32 countries of the Region with data available (including the United States and Canada), 14 had primary health care coverage for less than 80% of their populations. In 10 Latin American countries with data available, coverage for professional care during childbirth was 60% or less.

From 1980 to 1992, the availability of drinking water increased from 82% to 89% in urban areas and from 47% to 57% in rural areas; coverage with sewerage and other means of excreta disposal services increased from 78% to 80% in urban areas and from 22% to 34% in rural areas. Environmental monitoring and control of physical and chemical degradation are in their infancy in most countries in the Region.

During the early 1990s, health expenditures averaged 5.7% of GDP in countries of Latin America and the Caribbean. Almost 60% of that amount (3.2% of the GDP) was comprised out-of-pocket expenditures by the population. Health expenditure is an increasingly important component of total expenditure, due in part to a more rapid increase across the board in the cost of medical care with respect to the general rise in prices; increased spending on drugs and medications, and on the increased of diagnostic and sometimes curative technology. Health sector employment is another important factor; this represents 10% of the economically active population in Canada and 8% in the United States and Cuba.

Public sector decentralization aimed at a greater efficiency and responsiveness to local demands has progressed significantly, for example in Argentina, Brazil, Chile, Colombia, and Mexico.

Public sector facilities have been aging, and utilization rates for existing resources are low, owing not only to problems brought on by the adjustment process but in large measure, to changes in the epidemiological profile. The shift from predominance of communicable diseases, maternity and childhood diseases to where chronic-degenerative diseases begin to predominate implies the need for a corresponding change in the structure and profile of the resources required to address the situation.

Although the total number of human resources engaged in health care have increased, the structure of these resources has not changed. In the early 1990s, there were approximately 700,000 physicians in Latin America and the Caribbean and an equal number in the United States and Canada. Of a total 2,800,000 professional nurses in the Americas, 2,500,000 were in the United States and Canada and only 300,000 in Latin America and the Caribbean. In other words, while North America has more than 3 nurses per physician, Latin America has 0.5. The health personnel structure is shaped like an hourglass; many professional personnel on top, few technical and auxiliary personnel in the center, and the structure spreads out to reflect the large number of service and administrative personnel.

Notwithstanding the constraints and advances in the health sector, imbalances in investment processes and in basic sanitation need to be addressed through resource allocations that will afford equitable coverage and access to health care for the entire population.

Source: Division of Health and Human Development, Health Situation Analysis Program, HDP/HDA, PAHO.

WHO Interregional Meeting on New Public Health

Geneva, 27-30 November 1995

Background

Public health policy in the decade of the 1990s has been influenced not only by the health-for-all movement, with its emphasis on equity, but also by political and economic changes in the world at large. At the same time it is recognized that providing more equal access to health care, a traditional goal of public health authorities, will not necessarily reduce gaps in health status, insofar as disease is determined by individual behavior and by the working and living environment. Any genuine improvement in health will thus call for integrated, intersectoral action in addressing all the determinants of ill health. The training of health professionals will have to be reoriented accordingly.

The WHO Ninth General Programme of Work takes an integrated and multisectoral approach in addressing health problems. It stresses equity, health promotion and protection, and disease prevention. Cost and ethical aspects will play an important role in decision-making.

During the period covered by such a program (1996-2001), both the technical cooperation with countries and the directing and coordinating functions will be focused on enhancing the capacity of countries to define and implement their own priorities for health development and public health action, disease prevention and health promotion, and to establish sustainable health infrastructure.

One of the major results of world action during the Ninth General Programme of Work must be: "strengthened capacity of governments and policy-makers to undertake health-sector reform and establish national and local strategies to tackle such major public health tasks as removing inequities in health status; meeting the special needs of women; strenghtening the role of the family; improving living conditions; ensuring equitable access to health care for all; protecting people against violence and health hazards; integrating vulnerable groups into the mainstream of social and economic life".

One of the priorities for WHO's work will be determining "emerging public health problems by monitoring trends in health status, health risks and access to health services."

The eight essential elements of primary health care have served well as a guide during the last 20 years. Experience shows, however, that while new emphases have emerged, some elements are lagging behind, causing an imbalance in primary health care implementation. Health policies must be extended beyond the health sector, while continuing to be based on primary health care. The new policy needs to be strenghtened through four main thrusts: political action for health; health protection and promotion; health system development, reform and management; combating ill-health.

The Development Team on WHO's Policy and Mission, which met in August 1994, proposed the elaboration of a new global health policy evolving from health for all, with a 25-year horizon. The purpose of this policy would be to further the goals of the health-for-all strategy and to revise and update those elements made obsolete by the evaluation of the world situation.

In January 1995 the WHO Executive Board recommended a resolution to the World Health Assembly requesting the Director-General, *inter alia*, to:

- take the necessary steps for renewing the health-for-all strategy together with its indicators, by developing a new global health policy based on the concepts of equity and solidarity, emphasizing the individual's, the family's and the collective responsibility for health and placing health within the overall development framework;
- elaborate the new health policy to serve as objective and guidance for the updating of global, regional and national health-for-all strategies and for the development of mechanisms to enable all concerned to fulfill their role;
- redefine WHO's mission and the meaning of technical cooperation for WHO in pursuance of that policy;
- take the necessary measures for WHO to organize a high-level world conference, by the end of 1997, to adopt a health charter based on the new health policy, in order to obtain political ownership of the policy and commitment to its implementation.

Planning, management, monitoring and evaluation will need to be enhanced to ensure optimal efficiency and effectiveness of the health sector. This also implies an improved information data base to support such measures, complemented by enhanced skills of analysis and interpretation.

Today and tomorrow's public health professionals need to be aware of multisectoral issues and be knowledgeable in the areas of policy development, political sciences, communication and negotiation. Since resources are not increasing, new skills and competencies, especially regarding cost, value, policy, planning, and management, need to be developed.

It is clear that many schools of public health are providing sound training in a number of disciplines under the umbrella of public health, but emphasis on epidemiology alone is no longer sufficient. There are some gaps in the existing curricula, and many essential public health skills are not properly taught. Important issues such as resource allocations and priorities, which demand sound ethical principles, need to be considered.

But not everyone working in public health needs all these skills to the same extent. Therefore, in addition to a redefinition of what constitutes the new public health and the essential competencies required, it will be useful to develop a taxonomy of public health workers so that their training can be made as relevant as possible.

Achieving a Consensus

In 1994 the WHO Global Policy Council decided that to "reach the goals set out in the (WHO) Ninth General Programme of Work, a new public health concept is needed and a global consensus should be reached on training in public health". It was however stressed that any new public health concept would have to emanate from an adaptation of the existing Health For All policy.

To this end, WHO is preparing to hold an Interregional Meeting on New Public Health in Geneva from 27 to 30 November 1995. The objectives of the meeting will be:

1. To arrive at an optimal definition of the content and structure of the new public health practice for the implementation of the Ninth General Programme of Work and the renewed strategy for health for all.
2. To recommend how training and deployment of public health workers could be adapted to ensure an efficient delivery of new public health services.
3. To produce a monograph on the meeting.

In order to enrich the discussions and get as wide a perspective as possible on new public health issues, the WHO Director-General has decided to combine the annual Consultation with Leading Medical Practitioners (representatives of national medical associations from all the regions) with this interregional meeting. The main background position paper will, *inter alia*, synthesize the regional positions on public health. In addition, papers representing the views of medical and public health associations are expected.

The challenge of defining a new and clear view of public health has been taken up by all regions of WHO. As examples, a series of initiatives in the Americas has resulted in two recent reports which stress the need for the development of more comprehensive explanatory frameworks for public health[1]. These reports identify and debate many critical issues, among them the need for public health practitioners to develop the skills to manage the political processes that affect health. The WHO Regional Office for Europe, working with its collaborating centers and other partners, has begun to re-examine the public health training and research requirements in order to allow a process of reform and strengthening of health systems, and improvement in public health[2,3].

Such requirements strongly reinforce the need for an intersectoral approach to health policy development which would require that public health be capable of engaging in a dialogue with the actors in the other sectors. Mechanisms for such a dialogue must be developed. Policy directions and frameworks that have and will emerge from global initiatives such as the Fourth World Conference on Women to be held in Beijing and the World Summit for Social Development recently held in Copenhagen must be carefully evaluated and considered in the new public health. Similarly the work of the WHO Commission of Health and Environment will provide valuable information for the debate[4]. WHO/EURO argues that public health, to regain its position of influence, needs a consensus among policy makers, the scientific community, health care providers and consumers as to its scope and purpose. This interregional meeting will begin to forge such a consensus.

Source: Division of Health Systems and Services Development, Human Resources Development Program, HSP/HSR, PAHO.

[1] Pan American Health Organization, *On the theory and practice of Public Health: One Debate, Several Perspectives.* PAHO, 1993.

[2] Pan American Health Organization, *The Crisis of Public Health: Reflections for the Debate.* PAHO, 1992.

[3] World Health Organization, Regional Office for Europe and Centre for Public Health Research, WHO Collaborating Centre, Karlstael, Sweden, *Training and Research in Public Health,* 1994.

[4] World Health Organization, *Our planet, Our Health.* Report of the WHO Commission on Health and Environment. WHO, Geneva, 1992.

IX Conference of the International Association of Health Policy

The Université de Montréal will host the IX Conference of the International Association of Health Policy (IAHP), in Montreal, 13-16 June, 1996. The main theme will be: "Beyond Medical Care: Policies for Health".

This conference will cover the following topics: the social deteminants of health; the market and the State: the central and the local; the role of civil society; international aid, etc.

For futher information:
BUREAU DE CONSULTATION ET D'ORGANISTIONN DE CONGRES
Université de Montréal, c.p.6128, succursale Centreville, Montréal (Quebec).

Phone: (514) 343-6492; Fax: (514) 343-6544
E-mail: simardca@ere.umontreal.ca

Cholera in the Americas

From the onset of the cholera epidemic by *V. cholerae 01* in Peru in 1991 until June 15, 1995 a total of 1,075,372 cases and 10,098 deaths were reported in the Region of the Americas. The number of cases reported decreased by 45% between 1993 and 1994. More than 90% of this reduction is attributed to the decline in the number of cases reported in Bolivia, Ecuador, Peru, Guatemala and Mexico. In 1994, the overall case-fatality ratio for the Region was 1.09%.

During this same year, all countries where transmission of *V. cholerae* has been detected continued to register new cases, with the exception of French Guyana, Panama, Paraguay, Suriname and Venezuela. Some countries such as El Salvador, Honduras and Nicaragua, and a few states in Brazil, increased the number of reported cases. Uruguay and the countries of the Caribbean continue to be free from the disease since the beginning of the epidemic.

In 1994, the 38 cases reported in Costa Rica and 34 reported in the United States, were classified as imported. In the American continent, only the United States of America has reported isolating *Vibrio cholerae 0139* among individuals who have traveled to Asia in 1994. A small amount of antiserum 0139 for agglutination test is available through PAHO for reference public health laboratories. The use of this antiserum is indicated for *V. cholerae 01* isolates from patients who have recently traveled to Bangladesh, Burma, India, Malaysia, Nepal, Pakistan, China and Thailand; patients with severe diarrheal disease associated with an outbreak; or patients with severe cholera presentation.

During the first few months of 1995, explosive cholera outbreaks were registred in Peru (Lima and El Callao), El Salvador (San Salvador) and Mexico, in accordance with the seasonal distribution pattern of the disease.

Source: Division of Health and Human Development, Health Situation Analysis Program, HDP/HDA and Division of Disease Prevention and Control, Communicable Diseases Program, HPC/HCT, PAHO.

Cholera Situation in the Americas

Number of cases and deaths of cholera reported, by country and year, 1991-1995

Country	1991		1992		1993		1994		1995[1]	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
South America										
Argentina	-	-	553	15	2,080	34	889	15	9	-
Bolivia	206	12	22,260	383	10,134	254	2,710	46	70	-
Brazil	2,101	26	30,054	359	56,286	607	49,455	452	155	5
Chile	41	2	73	1	32	-	1	-	...	...
Colombia	11,979	207	15,129	158	230	4	996	14	54	11
Ecuador	46,320	697	31,870	208	6,833	72	1,785	16	...	...
French Guiana	1	-	16	-	2	-	...	...	...	...
Guyana	-	-	556	8	66	2	-	-	...	...
Paraguay	-	-	-	-	3	-	-	-	-	-
Peru	322,562	2,909	210,836	727	71,448	575	23,887	199	7,097	8
Suriname	-	-	12	1	-	-	-	-	...	...
Venezuela	13	2	2,842	68	409	10	-	-	-	-
Mexico and Central America										
Belize	-	-	159	4	135	3	6	1	10	-
Costa Rica	-	-	12	-	14	-	38	-	14(i)	-
El Salvador	947	34	8,106	45	6,573	14	11,739	40	2,382	2
Guatemala	3,652	50	15,686	207	30,605	306	4,227	156	...	...
Honduras	17	-	388	17	2,290	64	4,965	100	250	9
Mexico	2,690	34	8,162	99	10,712	193	4,059	56	3,112	53
Nicaragua	1	-	3,067	46	6,631	220	7,821	134	1,021	21
Panama	1,178	29	2,416	49	42	4	-	-	-	-
United States	26	-	103	1	22	-	34	-	5(i)	-
Total	391,734	4,002	352,300	2.396	204,547	2,362	112,612	1,229	14,179	109

(1) Reports received through June 15, 1995. Not reported ... No reported cases - (i) imported cases

Scientific Advisory Committee Meeting of the Caribbean Epidemiology Center (CAREC) - 1994

The XXI meeting of the Scientific Advisory Comittee (SAC) of the Caribbean Epidemiology Center (CAREC) took place during 15-17 March at CAREC, in Port-of-Spain, Trinidad. Fourteen SAC members and a similar number of observers from universities, national health agencies, international and national medical and research organizations, and PAHO, participated in the meeting, as well as members of the CAREC professional staff.

In addition to the Center Director's report, which reviewed the work of the preceding year, there were individual presentations on subjects such as: the health situation in CAREC Member Countries and CAREC's evolving role; the CAREC epidemiology training and health economics projects; dengue fever response; and a tuberculosis control strategy. A guest speaker from London Lighthouse, a center for people facing the personal challenge of AIDS, also made a presentation described the creation of that center and the services it provides.

In his presentation to SAC, the Head of CAREC's Epidemiology Division identified behavioral epidemiology, non-communicable disease control, and laboratory support as the major needs of CAREC Member Countries (CMCs). Priorities for the Center include: to improve service to CMCs, to produce information for action, and to help strengthen the public health infrastructure. Improvement of service will require new strategies while new approaches are required to identify CMC needs. Activities of the "information for action" priority will focus on (a) building the capacity of CMC decision makers to identify and set priorities, formulate health policies, identify cost-effective interventions, plan, monitor and evaluate programs, and obtain and allocate resources; (b) enhancing the skills of technical advisors in collecting valid data and improving data quality; and, (c) strengthening information systems, including data availability, accessibility, analysis, and interpretation. Infrastructure strengthening will initially focus on human resources, with a focus on decision makers, development of leadership, and information systems, with support for a health economics approach that can lead to better allocation of available resources.

Five working groups were established, which discussed: surveillance priorities, vital and health statistics utilization, directions for CAREC's role in HIV/AIDS and STD clinical management and care, aircraft disinsection, and tuberculosis strategy. The recommendations drafted by these groups were discussed in plenary sessions, revised accordingly, and included in the SAC report to CAREC Council. The principal elements of the SAC recommendations in these five areas are summarized below.

Concerning *Surveillance priorities:*

. While AIDS and other communicable diseases are continuing concerns, CAREC should also address surveillance of non-communicable diseases, infant and maternal mortality, reproductive health, and injuries.

. CAREC should seek resources and personnel with skills in behavioral epidemiology, to expand existing training activities and to enable collection and analysis of risk factor data and behavioral interventions.

. CAREC should help CMCs to implement minimum data sets required for calculaing burden of disease and, through training activities, help to develop skills within CMCs for calculating disease burden.

. Donors should be approached by CAREC for funds to provide support, personnel and training in health economics. CAREC should also ensure that projects acquire data which permit health and economic impact analysis.

Concerning *Vital and health statistics utilization:*

. CAREC should help to strengthen CMCs' capabilities for utilization of vital and health statistics, seeking sustainability through involvement of all relevant agencies, professional

associations and key perons at the local and national levels.

. CAREC should continue to evaluate and assist in the improvement of birth and death registration and, in association with other national and regional institutions, continue to promote the improvement of medical cause-of-death certification.

. During implementation of ICD-10, CAREC and CMCs should use opportunities for training and upgrading skills in coding and processing health data and increasing awareness of health statistics.

. Council should urge the relevant bodies to revitalize efforts to revise the *pro forma* Report of the Chief Medical Officer, and promote the preparation and use of these reports.

Concerning *Tuberculosis strategy*:

. CAREC should continue to use its influence through the Conference of Ministers Responsible for Health to promote, as a priority, the development and maintenance of TB control programs in all CMCs.

. CAREC should support the development of a standardized reporting system for the collection and dissemination of data on TB, whichs should include a TB registry, morbidity and mortality rates, relapse case rates, and treatment outcomes.

. Development of in-country diagnostic services should be facilitated by CAREC, througjh training and development of a quality control network. Each country must be capable of performing smear microscopy as the basic diagnostic test for support of the TB control program, and countries with culture capability should be supported to perform drug sensitivity testing.

. Through interaction with health professionals and teaching institutions in the Caribbean, CAREC should re-emphasize the importance of TB treatment and control within the curriculum.

. CAREC should recommend standardization of treatment regimens and management of TB in CMCs. Supervision of rifampicin-containing regimens is critical to prevent development of resistant strains.

. In light of the potential emergence of multyiple drug-resistant strains of *Mycobacterium tuberculosis* and the issue of coinfection with HIV in the Caribbean, CAREC should re-examine the need for activity in nosocomial infection control.

Concerning *CAREC's role in HIV/AIDS and STD clinical management and care*:

. HIV/AIDS and STD control should coontinue to be a priority program at CAREC, and adequate funding should be sought. CAREC itself should not expand into areas of management and care of persons with AIDS, but focus on its areas of expertise: Surveillance, laboratory support, design and evaluation of behavioral interventions, STD case management, and evaluation of control efforts.

Concerning *Aircraft disinsection*:

. CAREC should review the relevance, rationale and practices of international vector control through conveyance disinsection, and assist in the dissemiination of information regarding the effectiveness of alternate procedures, to assist CMCs in selecting appropriate control measures.

. CAREC should explore the options available for biochemical or genetic identification of the origin of imported vectors to support effective control measures, and use the results of these activities to provide advice and recommendations regarding control practices.

. If aircraft disinsection practices are maintained and adequate external resources can be obtained, CAREC should help to ensure proper and adequate training of involved airline personnel and periodic evaluation of the practices.

The CAREC Council met during 20-21 March, immediately following the SAC meeting. Their deliberations included consideration of the SAC recommendations, and all were accepted with relatively minor modifications.

Source: Division of Health Situation and Human Development, Health Situation Analysis Program, HDP/HDA, Division of Disease Prevention and Control, Caribbean Epidemiology Center, HPC/CAREC, PAHO.

AIDS Surveillance in the Americas

Number of reported cases of AIDS by year, and cumulative cases and deaths, by country and subregion, as of 10 June, 1995

SUBREGION Country	Number of cases Through 1989	1990	1991	1992	1993	1994	1995(a)	Cumulative total(b)	Total deaths	Date of last report
REGIONAL TOTAL	**179,975**	**63,853**	**76,389**	**95,305**	**90,307**	**33,213**	**1,186**	**580,129**	**304,493**	
LATIN AMERICA	**29,854**	**16,452**	**19,601**	**22,884**	**25,489**	**18,210**	**1,105**	**119,777**	**56,622**	
ANDEAN AREA	**2,577**	**1,591**	**1,778**	**2,047**	**1,866**	**1,834**	**72**	**11,816**	**6,041**	
Bolivia	18	9	18	18	20	14	...	97	74	31/Dec/94
Colombia	1,160	771	857	921	725	1,143	...	5,577	2,503	28/Feb/95
Ecuador	95	44	55	66	85	117	24	491	351	31/Mar/95
Peru	222	168	173	250	240	77	...	1,176	420	31/Dec/94
Venezuela	1,082	599	675	792	796	483	48	4,475	2,693	31/Mar/95
SOUTHERN CONE	**975**	**697**	**987**	**1,335**	**1,669**	**2,025**	**162**	**7,874**	**2,865**	
Argentina	654	481	704	1,038	1,358	1,820	132	6,187	1,882	31/Mar/95
Chile	226	134	192	190	178	73	...	1,016	623	30/Jun/94
Paraguay	12	6	5	17	30	13	...	84	53	31/Dec/94
Uruguay	83	76	86	90	103	119	30	587	307	31/Mar/95
BRAZIL	**13,527**	**7,331**	**9,688**	**11,612**	**12,491**	**7,665**	* <---	**62,314**	**23,341**	25/Feb/95
CENTRAL AMERICAN ISTHMUS	**1,162**	**909**	**935**	**1,219**	**1,603**	**1,650**	**233**	**7,798**	**2,459**	
Belize	25	11	10	13	24	8	...	100	82	30/Jun/94
Costa Rica	155	84	92	126	124	148	27	760	423	31/Mar/95
El Salvador	129	54	132	114	176	387	104	1,096	211	31/Mar/95
Guatemala	84	92	96	94	118	110	...	594	220	31/Dec/94
Honduras	563	592	505	745	965	785	71	4,283	947	31/Mar/95
Nicaragua	4	7	13	6	17	37	...	101	67	31/Dec/94
Panama	202	69	87	121	179	175	31	864	509	31/Mar/95
MEXICO	**3,317**	**2,588**	**3,167**	**3,220**	**5,095**	**4,049**	**619**	**22,055**	**12,716**	31/Mar/95
LATIN CARIBBEAN	**8,296**	**3,336**	**3,046**	**3,451**	**2,765**	**987**	**19**	**7,920**	**9,200**	
Cuba	44	29	37	68	80	87	19	364	231	31/Mar/95
Dominican Republic	1,188	257	279	327	311	227	...	2,589	489	31/Dec/94
Haiti	2,453	1,216	492	806	...	...	...	4,967	297	31/Dec/92
Puerto Rico	4,611	1,834	2,238	2,250	2,374	673	...	13,980 **	8,183	30/Sep/94
CARIBBEAN	**2,052**	**784**	**990**	**1,089**	**1,198**	**1,244**	**8**	**7,365**	**4,557**	
Anguilla	3	1	1	0	0	0	0	5	3	31/Mar/95
Antigua and Barbuda	5	3	6	13	7	6	...	40	9	31/Dec/94
Aruba	2	4	1	0	2	2	...	11	10	30/Jun/94
Bahamas	440	168	230	254	297	322	...	1,711	958	31/Dec/94
Barbados	111	61	80	78	88	119	...	537	421	31/Dec/94
Cayman Islands	5	2	4	4	0	3	...	18	15	31/Dec/94
Dominica	10	2	0	0	14	5	...	31	11	30/Jun/94
French Guiana	170	59	46	67	17	...	...	359	226	31/Mar/93
Grenada	19	5	7	4	21	7	...	63	46	31/Dec/94
Guadeloupe	185	53	67	48	17	...	...	370	226	31/Mar/93
Guyana	84	61	85	160	107	105	...	602	144	31/Dec/94
Jamaica	139	62	133	99	237	359	...	1,029	606	31/Dec/94
Martinique	124	44	30	42	26	...	...	266	184	30/Sep/93
Montserrat	3	1	2	0	1	0	0	7	0	31/Mar/95
Netherlands Antilles	47	30	23	10	47	...	...	157	79	30/Jun/93
Saint Kitts and Nevis	24	8	1	4	3	5	1	46	28	31/Mar/95
Saint Lucia	23	4	6	8	12	13	3	69	60	31/Mar/95
St. Vincent and the Grenadines	21	6	14	5	8	8	4	66	65	31/Mar/95
Suriname	57	33	16	28	35	20	...	189	172	31/Dec/94
Trinidad and Tobago	561	174	235	260	243	269	...	1,742	1,261	31/Dec/94
Turks and Caicos Islands	18	1	2	4	14	...	...	39	30	30/Sep/93
Virgin Islands (UK)	1	2	1	1	2	1	0	8	3	31/Mar/95
NORTH AMERICA	**148,069**	**46,617**	**55,798**	**71,332**	**63,620**	**13,759**	**73**	**452,987**	**243,314**	
Bermuda	135	33	23	17	15	44	...	267	194	31/Dec/94
Canada	4,500	1,305	1,360	1,504	1,417	1,033	73	11,192	7,880	31/Mar/95
United States of America	143,434	45,279	54,415	69,811	62,188	12,682	...	441,528 **	235,240	31/Dec/94

* Includes cases diagnosed in 1994 and 1995, as of 25 Feb 1995.
** Cumulative total number of cases for the United States of America includes data from Puerto Rico, total number of cases reported by Puerto Rico as of 30/Sep/94 has not been included in the Latin Caribbean totals.
a) 1995 data are incomplete due to delayed reporting.
b) May include cases for year of diagnosis unknown.

Outbreak of Ebola Hemorrhagic Fever - Zaire, 1995

On May, 6, 1995 an outbreak of viral hemorrhagic fever due to Ebola virus, in the city of Kikwit, Bandundi region, Zaire was reported to the World Health Organization (WHO) by the national health authorities.

Ebola disease was first recognized in the western equatorial province of the Sudan and the nearby region of Zaire in 1976; a second outbreak occurred in the same area in Sudan in 1979. The reservoir of the virus is unknown and the incubation period is from 2 to 21 days.

As of June 14 a total of 282 cases have been reported, with 222 deaths. The acute phase of this outbreak seems to be over.

The clinical picture is of severe viral illness, usually characterized by sudden onset, with weakness, fever, muscle pain, headache and sore throat, followed by vomiting, diarrhea, rash, limited kidney and liver involvement, and both internal and external bleeding. Ebola infections end in death in 50% to 90% of those clinically ill. No specific treatment or vaccine exists. An international team of experts organized by WHO has been actively collaborating with the government of Zaire to control the outbreak and had prepared a plan of action. The priorities of the plan are to:

- ensure the containment of the epidemic;
- better understand the Ebola virus epidemiology and its clinical manifestations;
- ensure overall administrative, technical and scientific coordination of the International Committee in Kikwit;
- strengthen national response to potentially epidemic diseases..

Source: Division of Health and Human Development, Health Situation Analysis Program, HDP/HDA, PAHO.

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PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION
525 Twenty-Third Street, N.W.
Washington, DC 20037