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EVALUATION OF THE TEN-YEAR HEALTH PLAN FOR THE AMERICAS

1971 - 1980

Initial Evaluation

August 1976

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INTRODUCTION

I. INTRODUCTION

The Ten-Year Health Plan for the Americas, drawn up by the III Special Meeting of Ministers of Health, held in October 1972 in Santiago, Chile, represents an effort to integrate and coordinate the work carried out by the countries of the Region to improve the health status of their populations, and is directed toward the development of health in the Hemisphere as a whole.

This overall approach is seen in the Plan's recommendations, which cover virtually all relevant aspects of the health field, arranged within the Plan's sphere of application to show clearly the similarity of the problems and of the approaches and methods of solution employed by the health systems to deal with those problems.

The efforts made by the countries were not, however, confined to drawing up the Ten-Year Health Plan. After formulating the Plan and including in it the Organization's policy, through a resolution of the Directing Council, the countries have striven to implement the recommendations of the Plan, whose initial objective is the formulation or revision of the countries' health policies. Many countries found it useful in that effort to employ the "Guide for the Analysis and Incorporation of the Goals of the Ten-Year Health Plan for the Americas in the National Health Policies," which was prepared by the Secretariat of the Organization. In addition to formulating and revising their policies, a number of countries adapted the goals of the Ten-Year Health Plan to their own objectives and proceeded to formulate national strategies to attain them. Some countries went on to plan their strategies and intermediate-term actions and to implement short-range activities.

At its XXI Meeting, the Directing Council of the Pan American Health Organization manifested its concern regarding the need to monitor the progress of the Ten-Year Health Plan and the way its proposals, objectives and goals were going to be implemented over the period. This concern was expressed in Resolution XIII, in which the Directing Council requested the Director of the Organization to convene a Working Group to design "an evaluation system that can be adapted to the unique conditions of the countries and still be flexible enough to give comparable results,which in turn will make possible a Continent-wide evaluatin of the achievements of the decade." Pursuant to that resolution, the Director set up a Working Group, which met in Washington in June 1973 and drew up a report containing the guidelines required for organizing a health system and for adopting a method to evaluate the Ten-Year Health Plan on a Hemisphere-wide basis. It also included a number of suggestions to the countries for organizing their individual evaluation systems.

Following the guidelines given by the Directing Council and the Working Group, a methodological scheme was drawn up to evaluate the initial situation and the development and implementation of the Plan at three points: initially in 1974, mid-term in 1977, and finally in 1981. The purpose of the scheme is to measure the achievement of the Ten-Year Health Plan at an overall regional level and to provide the interpretations needed for drawing up new Hemisphere strategies.

The scheme was designed on the basis of the Working Group's recommendation that the evaluation system should be oriented toward "facilitating each country's appraisal of the attainment of its individual goals, programs and strategies and ensuring the comparability needed to make a Hemisphere-wide assessment of the progress attained in the period 1971-1980." In general then, the scheme will make it possible to evaluate the efforts made by the countries in attaining their individual goals.

The evaluation scheme, and the questionnaires and instructions for making the initial appraisal, were submitted to the Executive Committee of the Organization for consideration at its 72nd Meeting in June 1974. The Executive Committee recommended, in Resolution XX, that the Director send the scheme and questionnaires to the governments and requested that they provide the information required for the initial evaluation. Pursuant to that recommendation, the Director sent the countries a set of questionnaires and the instructions for compiling the data. The final tabulation and analysis, which is presented in this document, had to be delayed until the countries provided the data requested. By late last year, most of the countries' responses were received, and by early 1976 data had been received from 22 countries, which comprise 92% of the Region's population. This is the universe covered in the present analysis.

SCOPE AND LIMITATIONS OF THE INITIAL EVALUATION

The key activities in any evaluation are comparing the subject under evaluation to the reference standard and making a judgment on the results of that comparison. A clear definition of the subject being evaluated and the standard of reference is essential to do this. Both aspects were dealt with specifically by the Working Group on Evaluation of the Ten-Year Health Plan, which defined the purpose of the initial evaluation as determining at the beginning of the period both the status of each area covered by the Plan and the extent of the countries' participation in implementing it by formulating and revising their health policies and defining their goals and strategies. These elements constitute the subject of the evaluation, based on the goals of the Ten-Year Health Plan, which provide the standard of comparison.

The status or situation of each area of the Ten-Year Health Plan at its inception had been determined with varying degrees of approximation by the Ministers of Health of the Region in 1972, and it was on the basis of that information that the Plan's recommendations were adopted. The initial evaluation, however, makes it possible for several additional steps to be taken, chief among them being: better organization of the information on the status of each area at the beginning of the decade, in accordance with the Ten-Year Health Plan's structure; filling in a number of gaps in the existing data; and delimitation of certain areas whose approach and implementation will require special attention in order to make a number of the Plan's recommendations feasible.

For determining the extent of the countries' participation in implementing the TenYear Health Plan, the initial evaluation provides sufficient data to identify the situation with respect to revision of policies and definition of national goals and strategies.

The Ten-Year Health Plan contains targets and recommendations for developing and improving virtually all aspects of the infrastructure and operation of the countries' health services systems and the levels and structure of the health of the population in the Region. Hence, the data required for evaluating the Plan is necessarily voluminous. This volume of data, however, has been reduced through systematic efforts to an essential minimum, which is contained in the set of questionnaires that was sent to the countries. As indicated, the summary, description and analysis of that data is the subject of this presentation.

The concepts contained in the questionnaires are general in nature. This broad approach is reflected in the use of qualitative indicators except, of course, for the Plan's quantitative goals. Such a general approach is understandable in view of the overall level of the analysis sought, since the goal is not to determine the situation in any one country but rather to appraise the status of the Region as a whole with respect to each aspect being analyzed. This focus is necessary, moreover, since the following situations must be taken into account:

(a) Frequently, the meaning of a given concept varies from country to country. This diversity of national definitions, which does not always occur, means that the aggregation limits that can be adopted in the analysis must be very broad. Since many countries have adapted the Ten-Year Health Plan goals to their individual policies, it was recommended, in order to surmount that limitation as far as possible, that those persons responsible for making such adaptations in their countries should also be in charge of furnishing the information requested in the evaluation questionnaires. That was not always possible, and therefore the limitation mentioned, which is more significant in some areas than in others, must be taken into consideration.

(b) The national health reporting systems vary widely in their development, and most of them are deficient, as the evaluation shows. Therefore, it is understandable that, in some cases, the countries have not responded to certain questions, and, in other cases, the data given disagrees with other information previously collected by those same countries. Since gathering the data required considerable effort for the countries and since the information was, in many cases, available from the replies made by those same countries to other requests, it was decided, in view of the level of the analysis to be made, not to request rectifications or ratifications. The data provided is accurately set forth in the tables, except for obvious transcription errors, which were corrected.

(c) Some concepts in the Ten-Year Health Plan recommendations are not applicable to certain countries. Those respondents had to interpret the concepts in order to formulate their replies and, of course, such data is not comparable with that from other countries.

(d) Variations in some replies were caused by the subjective approach of those filling out the questionnaire. Some replies are virtually opinions or evaluative judgments, and must be treated as such; in other cases--which fortunately are few--the replies are more an expression of wishful thinking than a description of the actual situation.

Within the above context, 22 countries of the Region have participated in making this initial evaluation. That number of countries provides Region-wide consistency for most of the estimates that are based on arithmetic sum indicators, since over 92% of the Region's population are included. With respect to other indicators, the number of countries reporting is sufficiently large for valid general appraisals to be made on the basis of the replies. However, not all countries responded to every area, and this sometimes reduces the reliability of the assessments. Wherever that situation obtains, it is noted.

The evaluation as proposed seeks to show the basic situation at the beginning of the 10 years and during implementation of the Plan. Because the data was requested in 1975, many countries, despite the care taken to have the data refer to the situation prevailing in 1971, reported on more recent periods, either because earlier data was lacking or because of a desire to give better data. Some of those that do provide data for 1971 tend to project it to cover the overall conditions prevailing in 1974 or even 1975. Hence, although such was not the intention, this initial evaluation shows not only the trends and guidelines adopted by the countries under the Ten-Year Health Plan, but also the more recent situation in those countries. This has so extended the time frame of the initial evaluation that the mid-term evaluation as originally planned would contribute very little and could be eliminated without major impact.

GENERAL FINDINGS

The responses given by 22 countries in the Region to the evaluation questionnaires provide the following results with regard to several areas that are particularly emphasized in the recommendations of the Ten-Year Health Plan:

(1) Definition of a health policy consistent with the economic and social development in each country, clearly specifying objectives and the structural changes needed to achieve those objectives, was considered a basic prerequisite for reaching the targets of the Ten-Year Health Plan. Two years after formulation of the Plan, 16 of the 22 countries participating in the evaluation had defined their policies, and the other six were in the process of doing so. This shows that there is a full awareness in the Region of the importance of a well-defined health policy. It also indicates that most policies are in line with the recommendations of the Ten-Year Health Plan and virtually all policies set priorities, many of which are in accord with those of the Plan.

(2) Judging by the responses, most of the 22 countries took the Plan targets as a reference point for their study and set their national goals for the various areas in line with it. If the countries meet their targets in most of those areas, the regional goals will also be attained. However, there is a smaller number of areas where attainment of national goals does not guarantee that regional targets will be met.

The Ten-Year Health Plan accords priority to control of communicable diseases, particularly those for which vaccination is available. Although all Member Countries have set reduction of these diseases as a target, achievement of their goals will not be sufficient to attain the regional objective. Greater efforts will be required to intensify vaccination programs, organize epidemiologic surveillance systems, improve planning and control activities in this area, and considerably extend, particularly in certain countries, the coverage of vaccination, health care, and epidemiologic control services.

Another priority area of the Ten-Year Health Plan is maternal and child care. Judging by the targets set by the countries, the Plan's goals may be far from completed at the end of the decade, unless coverage of these services is extended and infrastructure problems of the health systems are resolved, not to mention, of course, resolution of intersectoral problems affecting family health. According to the responses of the countries, intersectoral coordination at the policy and action program level is only partly dealt with or given token coverage in most countries. This problem will have to be surmounted, primarily through the active participation of the community, if regional goals, or even national targets, are to be met.

The field of nutrition has very special characteristics. Although the problem is undoubtedly large, its magnitude has not been precisely determined. Hence, setting national targets based on the Plan's goals for reducing malnutrition has not been easy. Judging by the responses to the questionnaire, few countries have a food and nutrition policy that is biologically oriented. Most of them are studying such a policy, however, and establishing it is a goal for the decade.

Providing water supply and sewerage disposal systems is another area to which the Ten-Year Health Plan devotes special attention. The Plan's goals for providing potable water to urban populations were closely followed by most of the countries, and if they succeed in reaching their targets, the regional goal will also be very near to completion. For rural populations, on the other hand, only about one-third of the countries' targets equal or exceed those of the Ten-Year Health Plan (provide 50% of the population with water service). The regional target will be approximately met only if the countries with the largest populations adopt goals higher than those of the Ten-Year Health Plan and attain them. However, it is obvious from the responses that this is not likely to occur. The situation with respect to sewerage disposal appears even less promising. National goals for providing sewerage services to urban populations reach or surpass the regional goal of 70% in only two out of five countries. The target for rural areas in the countries is, moreover, considerably lower than the regional goal of providing sewerage services for 50% of the rural population.

(3) Extension of health service coverage to the population receiving insufficient or no care in the countries of the Region is the key goal of the Ten-Year Health Plan and is probably the target of broadest impact and greatest importance. Most of the countries have formulated objectives to extend this coverage, but there are a variety of approaches in dealing with this problem, which is understandable in view of the diverse national policies that are reflected in the existing health systems. These reasons do not, however, explain all of the differences in approach, because if agreement is reached on determination of the basic problem, which is that certain groups of the population have little or no access to existing health services, there are still considerable differences in concepts, definitions and meanings, and policies and strategies to be ironed out. The initial evaluation is not sufficient to increase existing data on the coverage situation. Despite the efforts made, a number of countries have not yet clearly determined the magnitude of the problem. They do not know what services coverage is provided by existing health care units, nor the groups receiving care. There is an obvious need to reaffirm concepts and estimate the actual situation to make it possible to evaluate properly the attainment of the Ten-Year Health Plan goals. Furthermore, planning and implementing extension of coverage requires, particularly in view of the conditions in the countries of Latin America, varying approaches to organize the health system and to implement specific programs for setting up, developing and utilizing resources. These circumstances might change the outlook for the attainment of other national goals under the Plan.

(4) The Ten-Year Health Plan recognizes that, in order to achieve regional objectives, each country must set up a health service consistent with its individual characteristics, in accordance with a sectoral policy. Most countries (18 of the 22 responding) are aware of this need to set up and implement their national system in accordance with their individual policies and objectives and have formulated some sort of national goals to that end. Many countries have made sectoral evaluations to develop policy proposals for a broad overhaul of their systems, and some of them are implementing these proposals. However, it is expected that any decisions taken on the extension of coverage will make it necessary to review a number of aspects of the existing systems so that they can meet targeted requirements, including: medical care for individuals, at various levels of complexity under a graded system; training and management of personnel with nontraditional training; working more closely with the community and the active participation of the community in the system, etc.

(5) As was to be expected, the evaluation shows that the resources area is critical. Human resources now available in the countries are limited, and their rate of training, as well as the absorption capabilities of the health systems, prevent the rapid expansion required by the programs for extending coverage. Certain of the Plan's recommendations on training technical and auxiliary personnel must be studied and speedily decided upon, and utilization of such personnel must be in accord with the decisions taken on the levels of health care and the operation of the system.

Physical resources are also extremely limited. This situation is aggravated by geographic concentration, obsolescence and poor management of those resources. All of the countries have set some target to be met in this area during the decade. However, a Plan goal to increase by 106,000 the number of beds available for general medical care by remodeling facilities for the chronically ill wherever possible will not be met, according to the targets set by the countries. Plans to extend minimum services coverage will also require investments of some size to construct new facilities. Studies of financing for both investments and operating expenses will also demand special attention. For this reason, more emphasis must be placed on studying current sources of financing and exploring new avenues. This activity is not clearly reflected in the countries' replies to the Plan evaluation questionnaire. Activities in this field would appear to be more oriented toward the study of financing current services, frequently within the institutional, rather than the sectoral, sphere.

(6) The replies received on a number of areas in the evaluation questionnaire clearly show the difficulties the countries have encountered in obtaining and providing the data requested. Health information systems are not usually set up to utilize the data produced by a number of sources in the countries, not to mention the fact that the health sector's own sources are not easily accessible. Hence, activities planning loses effectiveness due to the lack of the reporting system required for evaluation and control.

In general, the countries are devoting attention to these factors and, since the formulation of the Ten-Year Health Plan, many of them have begun to organize and develop their reporting systems and to seek and employ more efficient methods for planning their activities. Review of the area of services coverage, on which work is now actively under way, may provide new methods in the near future for developing information systems and utilizing them more widely.

This concludes the general observations. The findings of the evaluation, made according to the specific areas set forth in the Plan, are given in the following chapter.

SPECIFIC RESULTS

LIFE EXPECTANCY AT BIRTH

	Life expectancy at birth (years)		Proposed strategies										
	1970	1980	Maternal and child care	Care of children 1-4 years	General medical care	Control of communicable diseases	Environmental sanitation	Improvement of nutrition	Development of health infrastructure	Extension of health services coverage: General	Extension of health services coverage: Rural areas	Others
Barbados	69.2	73	x		x	x		x		x		Care of chronic diseases
Bolivia	46	50.5	x	x		x		x	x	x		
Brazil	60	65	x			x	x				x	Intersectoral coordination
Canada	72.7*	73.9*								x		Changes in life style
Colombia	60.2*	65.2	x			x	x	x				
Costa Rica	66.8	71	x	x								
Chile	62.4*	67.4*				x						
Ecuador	58.8	63.8	x	x		x		x				
El Salvador	56.2*/1	61.9*/2	x	x	x	x				x		Family planning
United States	70.9	..										
Guatemala	51.5	56.5				x	x			x	x	
Guyana	66 *	68 *	x			x	x		x			
Honduras	52.7	57.7	x			x	x	x			x	Intersectoral coordination
Jamaica	68.5*	69	x				x	x		x		Family planning
Mexico	61	67										Implement National Health Plan
Nicaragua	53	58 /2	x									
Panama	64.9	69.1	x			x	x		x	x	x	
Paraguay	60.1	63.6										
Peru	58 /1	65 /2	x			x	x	x				
Dom. Republic	60.4	65.4	x			x	x	x	x			
Trinidad-Tobago	66.0	68.0	x			x						
Venezuela	66.1/2	67.0	x									

*Estimates made separately for each sex, consolidated on the basis of a ratio of 104 for male births. /1 Estimate for the period 1965-1970 /2 Estimate for the period 1975-1980 /3 1973

REGIONAL GOAL: To attain during the decade an increase of five years in those countries where life expectancy at the start of the decade was under 65 years, and an increase of two years in those countries where the figure was between 65 and 69 years.

Fourteen of the 22 reporting countries had a life expectancy at birth of less than 65 years at the start of the period; only two of them set their goals at less than a five-year increase during the decade, while the 12 others set goals of five or more years.

Of six countries with life expectancies between 65 and 69 years in 1970, four set their goals at an increase of two or more years by 1980, and the other two set more moderate goals.

The strategies mentioned for achieving the proposed goals center around decreasing infant and child mortality through carrying out programs of maternal and child care, of control of communicable diseases, of improvement of nutrition, and of environmental sanitation. It is interesting to note that half of the countries demonstrated their interest in the development of infrastructure for their health service systems and in extending the coverage with these services, whether in general or with emphasis on the rural areas, which is mentioned specifically as a strategy for achieving the proposed goals.

I. SERVICES TO INDIVIDUALS

A. COVERAGE

National definitions

	Definition of accessibility			Minimum services: Definition of "minimum services"			Minimum services: Definition of "elementary care unit"			Minimum services: Potential capacity of the "minimum units" (persons)	Basic services: Definition of "basic services"			Basic services: Definition of "basic care unit"			Basic services: Potential capacity of the "basic care units" (persons)
	Exists	Does not exist	Not reported	Exists	Does not exist	Not reported	Exists	Does not exist	Not reported		Exists	Does not exist	Not reported	Exists	Does not exist	Not reported	
Barbados	x			x			x			30000		x			x		
Bolivia		x			x			x		.		x			x		.
Brazil		x			x			x		.		x			x		.
Canada	x			x/1			x			.	x /2			x /1			.
Colombia		x			x			x		.	x			x			.
Costa Rica	x			x			x			3000	x			x			5,000-20,000
Chile	x			x			x			.	x			x			.
Ecuador	x			x					x	.			x	x			.
El Salvador	x			x			x			2500	x					x	.
United States		x			x			x		.			x			x	.
Guatemala		x		x			x			2,000-5,000	x			x			25,000-50,000
Guyana		x			x		x			.	x			x			.
Honduras	x			x			x				x			x			. /2
Jamaica	x			x			x			.		x		x			.
Mexico	x			x			x			.	x			x			.
Nicaragua	x			x			x			2000	x			x			5,000-20,000
Panama	x			x			x			(under study)	x			x			(under study)
Paraguay			x	x			x			.			x			x	.
Peru	x			x			x			5000	x			x			. /2
Dom. Republic	x			x			x			2000	x			x			.
Trinidad-Tobago	x				x			x		.		x			x		.
Venezuela	x			x			x			.	x			x			.

/1 For practical purposes it is considered that the entire population is accessible to medical and hospital care. Actually there is no clear distinction between the minimum, basic and specialized services that form a part of the referral network. /2 Variable according to type of unit

REGIONAL GOAL: To extend coverage, including minimum comprehensive services, to all the population living in accessible communities of less than 2,000 inhabitants, and to provide basic and specialized services to the rest of the population, through a regionalized health system.

It is not easy to carry out an overall analysis of the true coverage of health services in the Region because of the scarcity of available data. Nevertheless, by simply using rough indicators of the availability and accessibility of the resources available for health care, it was possible to underline the magnitude and the great importance of the problem of inadequate coverage of the health services offered, especially to the people of Latin America. At the beginning of the decade, in 11 countries of the Region there were fewer than five doctors per 10,000 inhabitants; the number of hospital beds in Latin America was 2.3 for every 1,000 inhabitants, and the number of persons for each care unit without beds was 12,000 on the average. Even though the number of beds had been increasing more or less constantly up to that time, its rate of growth was not only lower than the rate of population growth but was tending to decrease, especially in Central America.

Aside from this situation of shortage of resources, there is an acute problem in their distribution. It is a known fact that resources are generally concentrated in the capitals and in the large cities. According to the information available for 15 countries when the Ten-Year Health Plan was under consideration, the ratio of beds per 1,000 inhabitants ranged from 19.6 to 3.0 for the capitals and the large cities, and from 4.2 to 0.5 for the rest of the localities.

In the majority of the countries, the basic services provided to the resident population in localities with more than 20,000 inhabitants are more accessible for these populations than for those who live in smaller localities. In localities of 20,000 to 100,000 inhabitants, the coverage of basic services could be relatively acceptable, aside from the fact that specific activities of each program may be inadequate. Similarly, in localities of more than 100,000 inhabitants, where the availability of resources is greater, the coverage of basic services may be acceptable, probably with the same reservations regarding certain specific activities of some programs; nevertheless, the coverage of specialized services may be inadequate for these localities, and even more so in the case of smaller localities whose populations do not have access to such services.

Using approximate figures for 1970 from 26 countries and territories of Latin America and the Caribbean, and considering that the potential care capability of an elementary care unit can be set arbitrarily at 5,000 persons, it was possible to estimate that the coverage capability of the existing units was around 20% for localities with fewer than 2,000 inhabitants (45% of the population), about 90% for localities of from 2,000 to 20,000 inhabitants (13% of the population), and 100% for localities of over 100,000 inhabitants (28% of the population).

These problems, roughly outined here, and the analysis of a large quantity of other information derived from the national experiences, led the Ministers of Health of the countries of the Region to recommend the extension of coverage as a central goal of the Ten-Year Health Plan and one of its most important and significant goals. Various countries set out to achieve this goal immediately upon the formulation of the Ten-Year Health Plan, and it can be shown that the magnitude of the problem was in fact very great but that there were viable solutions, although some concepts, definitions, and approaches will have to be modified in the course of the operation of the Ten-Year Health Plan, and future evaluations should, therefore, take such changes into account.

NATIONAL DEFINITIONS

ACCESSIBILITY

According to the information provided by 21 of the 22 countries which participated in the evaluation of the Ten-Year Plan, 15 of them (more then three out of five) had a definition of "accessibility." In all cases, such definition is related to the concept of proximity of the persons to existing care units and to the possibility that such persons can travel to receive the services within a fixed period of time, using habitual means and routes of transportation. Aside from distance and time, none of the definitions includes accessibility criteria of any other sort, i.e., economic, social, or cultural, nor do they refer to the real view of accessibility held by the population which actually uses the services and which is, in the final instance, the most correct expression of the coverage.

By basing the definition of accessibility on the existence of care units, even when such accessibility has been properly evaluated, the estimating of true coverage and the proposing of goals for its extension would have to be limited to the population of the areas where such units exist. A separate treatment would have to be given to the programming of extension of coverage to localities which do not now have care units, but which can be made accessible--depending on the definition which may be adopted--through the establishing in them of new care units.

The experience obtained in the period between the formulation of the Ten-Year Plan and the carrying out of the evaluation operation in various countries which had begun activities to program the extension of coverage, shows that these definitions and concepts of accessibility and coverage will have to be revised and broadened before proceeding to subsequent evaluations of the Ten-Year Plan.

MINIMUM SERVICES

Of the 22 countries, 16 (almost four out of five) have a definition of "minimum services" which in most instances is similar to the definition in the Ten-Year Plan, that is, those integrated health services made available by elementary care units capable of providing outpatient care for emergencies and for mothers and for children under five years (including dietary, nutritional, family, and community education for hygienic living), vaccinations, promotion of basic sanitation, recording of statistical data, and the referral of patients to more complex units.

Despite the apparent agreement of the definitions of the countries (with the exception of one which does not recognize differences between minimum, basic, and specialized care), in practice there is not only no such agreement among them in terms of what is actually offered as minimum services, but also there are often important differences even within the countries themselves between the so-called minimum services offered in different areas by different institutions, or even by different sections of the same institution.

Four-fifths of the countries also stated that they had a definition of the "elementary care unit," as the least complex unit of the system of health services. Different names are used in different countries--sanitary posts, stations, offices, etc.--which in general are staffed by trained auxiliary personnel supervised by professional staff. Nevertheless, as in the case of the services offered by these units, there are in fact real variations in the level of complexity of these units, both between the countries and within them. The care capabilities of these minimum care units has been specified or defined in very few countries. Six of them make estimates which range from 2,000 to 5,000 persons.

From the replies received, it becomes evident that in defining their systems of health services the countries which are undertaking the programming of extension of coverage will have to have a better definition of their minimum services, classify their primary care units, and solve the problem arising from the existence of conflicting concepts and decisions adopted in the past which impede the standardization that would lead to a more homogeneous and efficient treatment of the services.

BASIC SERVICES

Of the 19 countries which replied, five have no definition of "basic services." The 14 remaining countries have national definitions of varying degrees of specificity, with the common thread that this type of care is provided by doctors and professional personnel and that it also has facilities for inpatient treatment. Only a few countries gave a definition of basic services in their various degrees of complexity, although in almost all of them it is implicit in the correspondence which most of them state exists between the classification of their medical care establishments and the type of services which the latter provide, for example, the sequence of medical post, health subcenter, health center, provincial hospital, regional hospital, national hospital, university hospital, or other similar categories.

Fifteen countries report that they have a national definition of "basic care unit," and five of them estimate their potential care capability, which varies according to the type of unit, ranging in two cases from 5,000 to 20,000 persons, and in one case from 25,000 to 50,000 persons.

As in the case of minimum services, it would be necessary for the countries which are programming the extension of coverage to give better definitions of their basic care units and of the services which these should provide, within the pattern of levels of increasing complexity which is characteristic of a regionalized care system.

A. COVERAGE (continued)

1. Minimum services

	Population in localities of less than 2,000 inhabitants (in 1,000's)		Population accessible to the services (in 1,000's)		Number of elementary care units		Population served by elementary care units (in 1,000's)		Population served by each elementary care unit (average)		Percentage of accessible population served		Population in localities of less than 2,000 with no service (in 1,000's)		Total population for each elementary care unit	
	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980
Barbados	0	0	(NA)	(NA)	9	14	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	0	0	26300	18800
Bolivia	3144	4519	1595	2906	371	856	662	1440	1783	1628	41.5	49.6	1857	1613	9117	5279
Brazil	36560	39820	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Canada	5958	6747	5958	6747	445/1	504/1	5958	6747	587/2	/2	100	100	0	0	o	o
Colombia	o	o	o	o	1530	2000	o	o	o	o	o	o	o	o	o	o
Costa Rica	946	1240	804	1240	49	341	147	1240	3000	3635	18.3	100	682	0	8876	3635
Chile	2635	2619	1976	2619	888	1500	o	o	1487	1500	75	100	659/4	o	10953	o
Ecuador	2365	2661	1134	1614	225	613	699	1405	3106	2291	61.6	87.0	1192	o	7752	o
El Salvador	1973	o	o	o	o	o	o	o	720	o	40.9	o	o	o	o	o
United States	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Guatemala	3523	4562	2385	3088	261	640	1057	2779	4050	4342	44	90	1577	456	10147	7127
Guyana	219/5	o	o	o	35	o	o	o	o	o	93	o	o	o	o	o
Honduras	1866/6	2550/6	939	1458	67	463	201	1389	3000	3000	21.4	95.3	1414/6	1161/6	6080	3351
Jamaica	1124/7	o	o	o	49	o	o	o	o	o	o	o	0	o	o	o
Mexico	20992	23332	6124	12069	2031	8735	9869	o	1905	o	o	o	18263	17377	o	o
Nicaragua	1070	1442	321	1009	164	210	125	500	762	2380	39	50	736	462	11730	6864
Panama	765	932	523	699	102	135	55/9	63/9	539	468	10.5/9	9.5/9	o	o	o	o
Paraguay	1191/4	1493	o	o	168/4	280	o	o	o	o	o	o	o	o	o	o
Peru	5555	7632	3933	4579	969	1572	1628	3183	1680	2025	41.4	69.5	4862	4490	6125	4855
Dom. Republic	2472	2792	2472	2792	104	300	2472	2792	23700	9300	100	100	0	0	23700	9300
Trinidad-Tobago	41	29	39	27	25	18	26	27	1024	1522	66.4	100	12	1	1717	1604
Venezuela	2888	3258	2454	3095	2500	2710	2454	3095	981	1142	100	100	295	163	1101	1202

/1 Hospitals /2 Per hospital bed /3 A small improvement only /4 1974 /5 1968
/6 Less than 3,000 inhabitants /7 1970 /8 Population of localities with less than 2,500 inhabitants /9 Does not include coverage of this population by more complex units (health centers) that operate in localities of less than 2,000 inhabitants.

In 1970 there were 182.5 million inhabitants of the Region of the Americas living in rural areas, that is, 35.7% of the 509.6 million people living in the Region. In Latin America and the Caribbean, the rural population that same year was 124 million persons, that is, 43.8% of the 283.3 million people living in these subregions.

According to rough estimates, the rural population of Latin America and the Caribbean, usually living in localities of less than 2,000 inhabitants, had around 5,000 elementary care units in 1970, that is, there was a ratio of more or less 25,000 persons for each elementary unit. If it is considered, as it was so considered in the Ten-Year Plan, that the maximum potential care capability of a unit of this sort is 5,000 persons, the maximum potential coverage by the units in existence at that time could be estimated at around 20% of the rural population.

The maximum care capability of a unit of this type is not affected by its mere existence and by the offering of services which it may make; in addition, it is necessary for the population to have access to those services. In this sense, considering only the criteria of physical and chronological accessibility and not others which can also play a basic role, the true coverage of this population with minimum services is significantly smaller. Judging from the replies to the evaluation questionnaire received from 12 Latin American countries which estimated a population of 46.6 million persons living in localities of less than 2,000 inhabitants in 1971, the population accessible to the services provided by 6,868 elementary care units was only 50%. According to estimates made by those same countries, such care units were only serving a population estimated at 13.4 million, that is, 29% of the population living in localities of less than 2,000 inhabitants, and 59% of the population considered accessible by the countries themselves.

What is most probable is that these figures, although low, actually overestimate the true situation; in the first place because the elementary units (which 18 countries reported as totalling 9,547) are not all situated in localities of less than 2,000 inhabitants, as some of them may be in larger localities; in the second place, the census tabulations of some countries may not include scattered populations within the figures for persons residing in communities of less than 2,000 inhabitants. Finally, it should be noted that the definition used for "accessibility" refers only to those persons living in localities where there were care units. This is made very clear in the replies of 11 countries which reported a total population of 46 million persons living in communities of less than 2,000 inhabitants, of which 31.5 million (68.5%) lived in localities which did not have services. Therefore, if the remaining 14.5 million (31.5%) lived in areas in which there were care units, and considering that under their own national definitions the accessibility of these populations to the services comes to more or less 50%, the population actually covered would in fact be below 20%.

According to information provided by 18 of the 20 countries of Latin America and the Caribbean which participated in the evaluation, there were 9,637 elementary care units operating in those countries in 1971; these were to serve a total population (for the 18 countries) of 142.4 million inhabitants. There was, then, an average ratio of 14,800 persons for each elementary unit, with a variation among the countries from a minimum of 4,100 to a maximum of 41,300, and an average of 20,600 persons per elementary unit.

In 15 of these countries (two did not report, and another foresees a decrease) it is expected that beween 1971 and 1980 there will be an increase of 115% in the number of elementary units, with the establishing of 10,923 new units which would make a total of 20,451 units operating in 1980, reducing the number of persons per unit from 14,600 to 9,400. The percentage increase in the number of units in these 15 countries varies from 8% to 596%, with an average of 69%.

If the new elementary units programmed in these 15 countries are situated in rural areas, placing them in localities which maximize accessibility in accordance with the national definition of such accessibility, it can be conjectured that, for those 15 countries as a whole, there could be a tripling of the present coverage of minimum services for the populations of those areas; even so, in these countries there would still be an important gap to be closed if the goal of the Ten-Year Plan is to be attained, even leaving out the fact that among the countries which did not report there is one which has a rural population of close to one-third of the total rural population of Latin America and the Caribbean.

A. COVERAGE (continued)

	2. Basic services											
	In localities of 2,000 up to 20,000 inhabitants											
	Total population attributed to these localities (in thousands of inhabitants)		Number of care units serving this population		Percentage of the population served by these units		Number of beds--all types--in these localities		Beds per 1,000 population		Percentages of specialized beds	
	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980
Barbados	0	0	-	-	-	-	-	-	-	-	-	-
Bolivia	420	536	46	189	40	60	3428	4372	8.16	8.16	9.2	5.9
Brazil	o	o	o	o	o	o	o	o	o	o	o	o
Canada /1	2692	3049	433	502	100	100	38246	43300	14.2	14.2	o	o
Colombia	6340/2	o	980	o	o	o	9107	o	o	o	o	o
Costa Rica	250	327	106	105	100	100	1295	1984	5.2	6.1	0	0
Chile	1050	1135	87	90	98	100	2749	2889	2.6	2.5	0	0
Ecuador	1391	1809	122	185	66	95	1391	3256	1.0	1.8	0	0
El Salvador	1518	o	31	o	26	o	187	o	0.1	o	0	0
United States	12177/3	o	o	o	o	o	o	o	o	o	o	o
Guatemala /4	1084	1404	72	125	100	100	161	600	0.14	0.4	0	0
Guyana	270/5	o	o	o	o	o	o	o	o	o	o	o
Honduras /6	144	215	74	65	o	o	o	o	o	o	o	o
Jamaica	231/7	-	2	o	o	o	677	o	2.9	o	o	o
Mexico /8	11914	17236	892	o	o	o	5469	o	0.46	o	0.26	o
Nicaragua	276	387	55	58	96	100	1110	1549	4.0	4.0	4.4	2.0
Panama	142	167	21	o	69	o	982	o	6.9	o		o
Paraguay	741/2	814	64/2	83	o	o	353/2	1208	0.2/2	0.5	0	0
Peru	1726	2520	304	372	78	82	5338	6455	3.1	2.6	1.8	1.3
Dom. Republic	380	641	24	42	100	100	448	752	1.1	1.2	0	0
Trinidad-Tobago	394	438	50	56	90	95	204	216	0.5	0.5	0	0
Venezuela	1480	2013	76	109	100	100	3313	4202	2.2	2.1	9.1	7.1

/1 Beds in psychiatric and mental hospitals, homes for retarded, tuberculosis sanatoria, child shelters and homes for the elderly and other similar institutions are not included. /2 1974
/3 Localities of 2,500 to 25,000 inhabitants /4 Beds computed are only those under the Ministry of Public Health /5 1968 /6 Localities of 3,000 to 10,000 inhabitants
/7 1970 /8 Localities of 2,500 to 20,000 inhabitants; the figures do not include non-official establishments /9 The data for 1971 include the entire health sector. Those for 1980 include only the increases in resources of the Ministry of Health.

BASIC SERVICES

(a) For localities of 2,000 to 20,000 inhabitants

According to the data supplied by 21 countries, around 12% of the population of those countries lived in localities of this size in 1971 (for the 19 countries of Latin America and the Caribbean that proportion was 20%). Only 14 countries reported the number of care units which provided health services in 1971 and gave estimates for 1980 (1,534 and 1,981, respectively, that is, an increase of 29%).

Seventeen countries reported on the number of beds of all kinds for inpatients in these localities in 1971. The total was 74,458 beds, giving a ratio of 2.3 beds for every 1,000 inhabitants. This ratio was 1.2 for the countries of Latin America and the Caribbean in this group (16 of the 17 countries), and there is great variation between the countries: from 0.14 to 14.02, with an average of 2.3 beds per 1,000 inhabitants.

Only 13 countries estimated the proportion of the population living in these localities which they consider as being "served." Five of them considered that the entire population was covered in 1971; three estimated a coverage of from 90% to 98%; and the other five estimated percentages ranging from 26% to 78%. Only 11 of these countries made forecasts for 1980, by which year seven countries expect to maintain or achieve total coverage, while coverage in the other four would range from 60% to 95%. It should be noted that these figures result from considering that the mere presence of a care unit in a locality makes the population of the latter automatically "served"; such a view is convenient but unrealistic. Estimating the accessible and served population should be carried out using the actual experience of the operation of the services, which in general is not done. In any case, the scanty information available shows that the achieving of 100% coverage with basic services for these populations, which the Ten-Year Plan urges, would not be in sight by 1980.

A. COVERAGE (continued)

2. Basic services (continued)

In localities of 20,000 up to 100,000 inhabitants

	Total population attributed to these localities (in thousands of inhabitants)		Number of care units serving this population		Percentage of the population served by these units		Number of beds--all types--in these localities		Beds per 1,000 population		Percentages of specialized beds	
	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980
Barbados	236	264	24	24	100	100	2263	2230	9.6	8.5	36	36
Bolivia	127	161	16	25	60	80	1315	1677	10.3	10.4	36	23
Brazil	0	0	0	0	0	0	0	0	0	0	0	0
Canada /1	2671	3025	149	169	100	100	32943	37307	12.3	12.3	0	0
Colombia	5911/2	0	598	0	0	0	10226	0	0	0	0	0
Costa Rica	143	187	15	15	100	100	1020	1170	7.1	6.3	0	0
Chile	1808	2173	70	70	100	100	8982	9630	5.0	4.4	6.4	6.6
Ecuador	828	1397	46	92	85	100	1905	4610	2.3	3.3	16.5	15.0
El Salvador	1398	0	35	0	86	0	1703	0	1.2	0	12.7	0
United States	34574/3	0	0	0	0	0	0	0	0	0	0	0
Guatemala	1626	2106	29	31	100	100	4903	5200	3	2.5	0	0
Guyana	0	0	0	0	0	0	0	0	0	0	0	0
Honduras	1688/4	0	0	0	0	0	0	0	0	0	0	0
Jamaica	0	0	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mexico /5	6074	8618	149	0	0	0	2295	0	0.38	0	19.13	0
Nicaragua	197	262	9	11	95	100	1483	1836	7.5	7.0	28.8	17.2
Panama	211	205	10	0	73	0	430	0	4.4	0	0	0
Paraguay	218/2	444	6 /2	9	0	0	264 /2	560	0.12	0.2	0	0
Peru /6	1042	1521	141	167	86	89	7496	7944	7.2	5.2	10.8	10.0
Dom. Republic	403	679	46	47	0	0	2265	2365	0.5	0.3	0	0
Trinidad-Tobago	473	675	32	36	100	100	947	1260	2.0	1.9	4	3
Venezuela	2153	2928	109	110	100	100	8505	11478	4.0	3.9	19.7	12.5

/1 See note (/1) of preceding table. /2 1974 /3 Localities of 25,000 to 100,000 inhabitants
/4 Localities of 10,000 to 199,999 inhabitants /5 The figures do not include non-official establishments /6 The data for 1971 include the entire health sector. Those for 1980 include only increases in the resources of the Ministry of Health.

BASIC SERVICES

(b) *For localities of 20,000 to 100,000 inhabitants*

Twenty countries supplied estimates of the populations residing in localities of this size in 1971, which totaled 61 million inhabitants, or 17% of the total population of those countries. Only 17 of the countries reported on the number of establishments of all types which offered health services in those localities in 1971, which totaled 1,494. Of these 17 countries, only 13 estimated the number of establishments which would be in operation in 1980, for a total of 806, which represents an increase of 14% with respect to the 702 establishments which those 13 countries had in 1971.

Thirteen countries gave estimates of the population of these localities which they considered as being served by the existing care units. Seven of those countries estimate that 100% of the population was served in 1971, while the other six countries provided estimates ranging from 60% to 95%. From these figures it can be conjectured that in 1971 various countries had localities of more than 20,000 inhabitants which did not have care units and therefore did not have basic services; but to the population of these localities would have to be added the population of those localities which had care units whose true coverage was less than 100%. This fact would be concealed by the tendency to consider that the existence of a hospital or health center in any locality automatically converts the population of the latter into a covered population. Even without this limitation, the shortage of basic services coverage of the population of these localities would still be forecast for 1980. In fact, of 11 countries which made forecasts for 1980, there are two which believe that they will not be able to provide services to 100% of the population of those localities. An additional effort will be necessary if the goal of the Ten-Year Plan, to attain 100% coverage, is to be achieved.

From the information provided by 18 countries, it can be inferred that 25% of all beds in localities of more than 2,000 inhabitants would be available to the population residing in communities of from 20,000 to 100,000 inhabitants, that is, to aproximately 17% of the population of the country. The great majority of these beds are general beds, since the percentage of specialized beds, according to the information obtained from 13 countries, ranged from 0 to 36%, with an average of 12%; it is expected that in the majority of cases there would be a reduction of these percentages by 1980.

A. COVERAGE (conclusion)

	2. Basic services (conclusion)											
	In localities of 100,000 and more											
	Total population attributed to these localities (in thousands of inhabitants)		Number of care units serving this population		Percentage of the population served by these units		Number of beds--all types--in these localities		Beds per 1,000 population		Percentages of specialized beds	
	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980
Barbados	0	0	-	-	-	-	-	-	-	-	-	-
Bolivia	972	1239	61	66	100	100	4529	5776	4.66	4.66	17	11
Brazil	o	o	o	o	o	o	o	o	o	o	o	o
Canada /1	10246	11603	212	241	100	100	66400	75195	6.5	6.5	o	o
Colombia	8424 /2	o	545	o	o	o	21808	o	o	o	o	o
Costa Rica	446	585	27	29	100	100	4939	5563	11.0	9.5	46.2 /3	38.2 /3
Chile	4055	5333	71	75	100	100	24559	26679	6.0	5.0	33	o
Ecuador	1354	2068	55	134	90	100	5686	12410	4.2	6.0	54	45
El Salvador	619	o	21	o	100	o	4072	o	6.6	o	51	o
United States	56464	o	o	o	o	o	o	o	o	o	o	o
Guatemala	705	912	10	10	100	100	4361	4361	6.2	4.9	44	44
Guyana	o	o	o	o	o	o	o	o	o	o	o	o
Honduras	o	o	o	o	o	o	o	o	o	o	o	o
Jamaica	506 /4	o	24	o	o	o	4986	o	9.9	o	o	o
Mexico /5	11849	16518	59	o	o	o	1641	o	0.14	o	21	o
Nicaragua	346	428	5	4	100	100	1966	4170	5.7	9.8	25.7	14.0
Panama	361	635	16	o	84	o	2524	o	1.0	o	o	o
Paraguay	421 /2	491	17 /2	17	o	o	639 /2	830	0.25	0.26	o	o
Peru /6	4693	6853	211	230	84	84	16901	18861	3.6	2.8	26.6	26.0
Dom. Republic	878	1480	24	26	o	o	5134	5654	5.8	3.8	31.0	28.0
Trinidad-Tobago	112	127	9	9	100	100	2895	2403	25.9	20.0	2.4	2.8
Venezuela	4201	5714	144	162	100	100	20237	23806	4.8	4.3	29.9	20.8

/1 See note (/1) of preceding table. /2 1974. /3 Only psychiatric, tuberculosis, leprosy and nutrition beds are counted as "specialized" /4 1970 /5 The figures do not include non-official establishments /6 Data for 1971 include the entire sector. Those for 1980 include only the increase in resources of the Ministry of Health.

BASIC SERVICES

(c) For localities of 100,000 inhabitants or more

According to the information provided by 19 countries, in 1971 some 107 million persons lived in localities of over 100,000 inhabitants, close to 29% of their total population. In 15 of those countries which reported estimates for 1980, the population living in these cities would grow by 31% during the period (the population of the Latin American countries in this group would grow by 37%).

The number of care units, principally hospitals, located in these communities--850 reported by 13 countries in 1971--would be increased by 18% during the period 1971-1980. Nevertheless, if one country which proposes an increase of 144% (from 55 to 134 units) is omitted, the rate of increase for the remaining 12 countries is reduced to only 9%.

Twelve countries gave estimates of the proportion of the population in these cities which was covered by the units in existence in 1971. Only nine countries thought they had achieved 100%. Of the other three, only two proposed to achieve total coverage by 1980. There is, then, some recognition that even in the large cities full coverage of the population with basic services has not been achieved, and that additional efforts will have to be made if the regional goal of 100% for 1980 is to be attained.

As regards the number of beds available for the care of people living in localities of over 100,000 inhabitants, 18 countries, with a population of 50.2 million living in such localities in 1971, reported that they had 190,277 beds of all types available, that is, a ratio of 3.8 beds for every 1,000 inhabitants. The ratio varied among the 18 countries, ranging from 1.5 to 25.9 per 1,000, with an average of 5.8. The group of 17 Latin American and Caribbean countries showed an overall ratio of 3.1 beds per 1,000 inhabitants.

Twelve countries have estimated the increase in the number of beds in localities of this size at 17% for the period 1971-1980, almost one-half of the population growth of these communities expected over the same period. Two of these 12 countries account for 32% of the increase in number of beds, since they calculate an increase of 116%, hence the increase would be only 12% for the other 10 countries.

In 1971, the number of specialized beds installed in localities of 100,000 or more inhabitants in 12 countries varied from 2.4% to 54% of the total number of existing beds, with an average close to 30%. In nine countries which made forecasts for 1980, a general trend towards a decrease in this ratio can be seen.

B. COMMUNICABLE DISEASES

	1. Smallpox						2. Measles					
	Considered to be a problem		Number of cases		Primary vaccinations per 1,000 inhabitants		Considered to be a problem		Deaths per 100,000 inhabitants		Percentage of children under 5 years vaccinated with complete series of vaccine doses	
	Yes	No	1971	1980	1971	1980	Yes	No	1971	1980	1971	1980
Barbados		x	0	0	41			x	0	0	0	0
Bolivia		x	0	0	6	0	x		22	5	3.1	60
Brazil		x	19	0	56	33	x		9.3 /1		47 /2	50
Canada		x	0	0	..	0	x		0.1 /3	.. /4	..	80
Colombia		x	0	0	747	1.000	x		11.6	1.0	18.9	80
Costa Rica		x	0	0	490 /2	.. /6	x		4.7	0	60	80
Chile		x	0	0	76	120		x	6.1	0.1	85 /2	95
Ecuador		x	0	0	44	36	x		52	7	60 /2	80
El Salvador		x	0	0	60		x		14.7		2.7	
United States		x	0	0	20	0	x		0.036	0.011	61	75
Guatemala		x	0	0	20	0	x		105.5	1.0	0.3	80
Guyana		x	0	0				x		1.0		
Honduras		x	0	0			x		2.6	0.2	0.03	80
Jamaica		x	0	0	14	25		x	1.5			
Mexico		x	0	0	34	28	x		17.6	0.8	4.5	80
Nicaragua		x	0	0	30	80 /7	x		15.8 /2	7.9	4.8 /2	80
Panama		x	0	0	18		x		20.9	1.0	11.1	80
Paraguay		x	0	0	60	27	x		26.7	1.1	0	80
Peru		x	0	0	..	26	x		85	1.0	18.4	70
Dom. Republic		x	0	0	3		x		3.5	1.0	1.6	
Trinidad-Tobago		x	0	0	..	40	/8	/8	0.2	0.0	0	0
Venezuela		x	0	0	59	35	x		7.5	3.0	8	26

/1 In 21 capitals of States /2 1974 /3 Period 1969-1971 /4 Maintenance of observed trend
/5 1970 /6 Surveillance /7 Children under 5 years /8 Under study

1. SMALLPOX

REGIONAL GOAL: Maintenance of eradication.

The smallpox eradication program in the Americas began in 1967. During the period 1967-1971, there were 18,106 cases reported in the Region, almost all of them in Brazil. Despite intensive search, no new cases have been found since April 1971, and the eradication from the Region was certified in 1973.

In view of the success achieved by the program, the 22 reporting countries have ceased to consider smallpox as a problem, and have set the maintenance of eradication as their goal for 1980. This will call for developing and broadening the epidemiological surveillance services and continuing the vaccination of nonvaccinated persons and of the newborn children who are being added to the population; this would imply that, under a regular program of maintenance, the annual number of first vaccinations per 1,000 inhabitants would have to be greater than the birth rate. Only 10 of the 22 reporting countries indicate that they propose to carry out this type of activity in 1980; on the other hand there are indications that the levels of vaccination would not be attaining the established goal of 80%.

2. MEASLES

REGIONAL GOALS: To reduce the rate of mortality to not more than one per 100,000 inhabitants.
To vaccinate 80% of children under five years and to maintain this proportion every year.

Available estimates for 1971 place mortality rates from measles at 0.0 per 100,000 for North America, 16.8 per 100,000 for Mesoamerica, and 12.5 per 100,000 for South America. Cases reported in that same year, probably highly understated, give estimates of 36.3, 82.7, and 92.6 cases per 100,000 inhabitants for the same subregions.

According to the information included in the evaluation questionnaire, four of the 22 reporting countries had already achieved and surpassed the regional goal by 1971, with mortality rates below one per 100,000. The remaining 18 countries had rates between 1.5 and 105.5 per 100,000, with an average around 15 per 100,000. Nineteen countries have set goals of maintaining or decreasing the mortality rates during the decade, 14 of them adopting the goal of the Ten-Year Plan.

The vaccinating of children under five years was indicated in the Ten-Year Plan as one of the most important strategies to achieve the goals of reducing mortality from measles. As of 1971, only two countries were using the vaccine extensively, and in 1974 some other countries joined them. Four of the reporting countries have not set coverage goals for the anti-measles vaccinating of children under five years by 1980; two countries do not propose to vaccinate; five countries set goals below the 80%; and the remaining 11 countries adopted the regional goal or higher levels of coverage. According to recent indications, it would seem that the situation hoped for is somewhat optimistic, and that in some countries in which programs of vaccination on a large scale have been carried out the maintaining of the levels of vaccination has not been performed adequately, with high rates of incidence occuring among children under three years of age.

B. COMMUNICABLE DISEASES (continued)

	3. Whooping cough						4. Tetanus							
	Considered to be a problem		Deaths per 100,000 inhabitants		Percentage of children under 5 years vaccinated with complete series of vaccine doses		Considered to be a problem		Deaths per 100,000 inhabitants		Percentage of children under 5 years vaccinated with complete series of vaccine doses		Percentage of vaccinated pregnant women living in tetanus area	
	Yes	No	1971	1980	1971	1980	Yes	No	1971	1980	1971	1980	1971	1980
Barbados		x	0.4	0	72	100		x	4.2	0.5	72	100	..	20
Bolivia	x		2.0	1.8	7	40	x		..		7	40	..	20
Brazil	x		1.3 /1		16 /2	42	x		6.3 /1		16 /2	42	23 /2	58
Canada		x	0.02 /3	.. /4	..	80		x	0.02 /3	.. /4	..	80	0	
Colombia	x		7.1	1.0	50	80	x		3.6	1.0	50	80	..	60
Costa Rica	x		2.6	0.8	15 /5/6	75	x		7.6	2.3	15 /5/6	75	0	85
Chile		x	0.6	0.3	78	90		x	0.4	0.09	0	90	..	
Ecuador	x		27.4	2	10	79	..	..	18.4	0.5	13	79	0.2	80
El Salvador	x		7.7		14		x		8.4		14		25	
United States	x		0.007	0.003	71	80	x		0.038	0.027	71	80	..	..
Guatemala	x		53.6	1.0	26 /5	80 /5		x	3.9	0.5	26 /5	80 /5		40
Guyana		x		1.0			x		/7	0.5				
Honduras	x		14.8	12.4	12	80	x		2.9	0.2	12	80		80
Jamaica		x	0.3		12	60		x	4.9		12	60	..	
Mexico	x		11.0	1.0	15	80	x		3.7	0.3	15	80	..	90 /8
Nicaragua	x		3.2 /6	0.6	6	80	x		15.7 /6	7.8	6	80		60
Panama	x		9.0	1.0	11	80	x		11.0	1.0	25	80		
Paraguay	x		2.2	1.0	8	80	x		18.6	2.6	8	80	17	80
Peru	x		88	4.0	10	40	x		2.0	2.0	10	40		
Dom. Republic	x		0.3 /9	1.0	26	80	x		10.6	3.0	18	80	25	60
Trinidad-Tobago	x		0.0	0.0	0	80	x		1.3	0.0	16 /2	80	6 /2	20
Venezuela	x		1.0	0.5	18	31	x		2.9	0.8	26	31	37	60

/1 In 20 capital cities /2 1974 /3 Period 1969-1971 /4 Maintenance of observed trend
/5 Children under 6 years /6 1970 /7 Fourteen cases in 1974 /8 In municipalities with rates of 19 or more per 1,000 live births /9 Believed to be underestimated

3. WHOOPING COUGH

REGIONAL GOALS: To reduce mortality to a rate of one per 100,000 inhabitants.
To vaccinate 80% of children under five years with a complete series of doses.

Existing estimates for 1971 place whooping cough mortality rates at 0.0 per 100,000 for North America, 11.2 per 100,000 for Mesoamerica, and 7.9 per 100,000 for South America. Cases reported by notification that same year gave estimated rates of 2.7, 52.9, and 89.2 per 100,000 for each of these sub-regions, respectively.

According to the replies obtained to the evaluation questionnaire, in 1971 one-third of the countries had achieved or surpassed the 1980 regional goal of a mortality rate of one per 100,000 inhabitants. On the other hand, 13 countries had rates ranging from 1.3 to 88 per 100,000, with an average close to 8 per 100,000 inhabitants. All of the countries intend to lower their rates by 1980, and only four of them have set as goals mortality rates higher than the regional goal.

Information regarding vaccination in the countries is not very trustworthy; nevertheless, 1971 estimates from 20 countries indicate that the proportion of children under five years who had been vaccinated with a complete series of doses varied from 0 to 78%, with an average close to 15%. Of the 20 countries which have set national goals, there are 13 which have adopted rates equal to or higher than the regional goal of 80% of children vaccinated with a complete series of doses; the seven remaining countries have set more modest goals, ranging from 31% to 79%. The regional goal will probably not be attained unless the DPT vaccination programs are intensified.

4. TETANUS

REGIONAL GOALS: To reduce mortality to a rate of 0.5 per 100,000 inhabitants. To vaccinate 80% of children under five years with a complete series of DPT vaccine doses. To seek to vaccinate 60% of the pregnant women in the tetanigenous areas with tetanus toxoid.

In 1971 the rates of mortality from tetanus were estimated at 0.0, 3.9, and 4.9 per 100,000 inhabitants for North America, Mesoamerica, and South America, respectively. According to information included in the evaluation forms, in 1971 only three countries had mortality rates below the regional goal for 1980. The remaining countries reported rates ranging from 1.3 to 18.6 per 100,000, with an average of 4.9 per 100,000. Eighteen countries intend to reduce their rates by 1980, 10 of them to levels equal to or lower than the regional goal; the remaining eight propose to achieve rates ranging from 0.8 to 7.8 per 100,000.

Antitetanus vaccination of children under five years, as reported by 20 countries, shows figures which range from 0 to 72% of children vaccinated with a complete series of doses, with an average of 15%. Thirteen of these countries set goals for the vaccinating of children at levels which equaled or were superior to the regional goal of 80%, while the remaining seven chose lower goals, ranging from 31% to 79%.

Information on the proportion of pregnant women vaccinated in tetanigenous areas in 1971 is very sparse. Only nine countries reported proportions, which range from 0 to 37%. Nevertheless, 14 countries propose to carry out this type of vaccination at rates ranging from 20% to 90%. Nine of them coincide with or exceed the regional goal of 60%.

B. COMMUNICABLE DISEASES (continued)

	5. Diphtheria						6. Poliomyelitis					
	Considered to be a problem		Number of cases per 100,000 inhabitants		Percentage of children under 5 years with complete series of vaccine doses		Considered to be a problem		Number of cases per 100,000 inhabitants		Percentage of children under 5 years with complete series of vaccine doses	
	Yes	No	1971	1980	1971	1980	Yes	No	1971	1980	1971	1980
Barbados		x	8.5	0	72	100		x	0	0	74	100
Bolivia	x		1.4	1	7	40	x		0.7	0.1	3	40
Brazil	x		11.0		16 /1	42	x		12.1 /8	0.5	40	80
Canada		x	0.2 /3		..	80		x	0.01	.. /4	..	80
Colombia	x		2.9	1	50	80	x		2.31	0.1	9	80
Costa Rica	x		5.7	1.7	15	75 /5	x		1.25 /2	..	71 /2/6	75 /7
Chile		x	4.7	2.5	76	90		x	0.6	0.0	63	90
Ecuador	..	..	0.8	1.0	12	79	..	..	1.2	0	37	80
El Salvador	x		7.8		14		x		1.8		11	
United States	x		0.146	0.122	71	80	x		0.012	0.002	58	70
Guatemala	..	..	0.4	1.0	26 /5	80 /5		x	5.6	0.1	7	80
Guyana	x		5.0	1.0				x	0	0.1		
Honduras	x		0.7	0.2	12	80	x		1.2	1.0	12	80
Jamaica		x	2.0		12	60		x	0	0	18	80
Mexico	x		0.32	0.03	15	80	x		2.0	0.1	39	80
Nicaragua		x	0.7 /9	0.35	6	80	x		2.5 /9	0.75	8	95
Panama	x		1.5	0.0	35	80		x	5.1	0.0	68	80
Paraguay	x		5.8	1.0	8	80	x		11.1	0.3	22	80
Peru	x		0.4	0.6	10	40	x		1.0	0.1	21	65
Dom. Republic	x		6.6	1.0	18	80	x		2.4	0.1	49	
Trinidad-Tobago	x		6.3	0.0	16 /4	80	x		4.5	0.0	1	75-80
Venezuela	x		0.8	0.1	18	31	x		3.7	0.1	80 /7	43 /10

/1 1974 /2 1970 /3 Period 1969-1971 /4 Maintenance of trend /5 Children under 6 years
/6 Children under 7 years /7 Infants under 1 year /8 39 cases in 1971 /9 1972
/10 Up to 2 years of age

5. DIPHTHERIA

REGIONAL GOALS: To reduce the morbidity rate of diphtheria to one per 100,000 inhabitants.
To vaccinate 80% of children under five years with a complete series of doses.

In 1971, diphtheria morbidity rates were 0.1, 1.0, and 3.9 per 100,000 for the subregions of North America, Mesoamerica, and South America, respectively. According to the evaluation forms for the Ten-Year Plan, the rates in the 22 reporting countries ranged between 0.1 and 11.0 per 100,000, with an average of 1.8 cases per 100,000 inhabitants. Sixteen countries set their goals for reducing morbidity to rates equal to or below the regional goals, and two countries adopted reduction to rates greater than one per 100,000.

The proportion of children under five years vaccinated with a complete series of doses showed considerable variation in 1971, with values ranging from 6% to 76%, with an average around 15%. Thirteen countries propose to achieve vaccination levels of 80% or more by 1980; two countries have set goals of 75% to 79%; and another five countries adopted goals between 31% and 60%.

Judging by recent indicators, the achieving of the regional goal will require an effort by the countries to intensify their DPT vaccination programs.

6. POLIOMYELITIS

REGIONAL GOALS: To reduce the morbidity rate to 0.1 per 100,000 inhabitants.
To vaccinate 80% of children under five years with a complete series of doses.

The reported incidence of poliomyelitis, after the increase noted during 1970, declined consistently during the period 1971-1973 until it reached the historically lowest levels observed in the Region (less than one case per 100,000 inhabitants). In North America, the annual average number of cases during the four-year period 1969-1972 was only 29, while in Mesoamerica 1,454 cases were recorded, and 3,247 cases in South America. These two latter figures include various outbreaks, in which a high percentage of cases involved children under three years of age. The 1971 rates of incidence provided by the countries on the evaluation questionnaire vary between 0 and 11.1 per 100,000, with an average of around 1.5 per 100,000. Sixteen countries (four out of five) have set as their goals for 1980 to attain the regional goal or a lower rate, while another four have set their goals at between 0.3 and 1.0 per 100,000.

The proportion of children vaccinated during 1971 shows great variations; nevertheless there are recent indications that great progress is being made towards achieving the regional goal. Only four countries have set vaccination goals lower than the 80% adopted as the regional goal, and if the programs are carried out as proposed, the regional goals will be attained.

B. COMMUNICABLE DISEASES (continued)

	7. Tuberculosis															
	Considered to be a problem		Deaths per 100,000 inhabitants		New cases per 100,000 inhabitants		Percentage of children under 5 years vaccinated with BCG		Percentage of new cases commencing treatment		Percentage of new cases commencing ambulatory treatment		Bacilloscopies for diagnosis of TBCx100 in first consultation patients over 15 years		TB beds (as percentage of total beds in the country)	
	Yes	No	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980
Barbados		x	4.7		11	8	1.9		..		..				1.0	0
Bolivia	x		120 /1	60	300	200	20	60	70	95	50	80	1.8	6	12	6
Brazil	x		36 /1	15	118/2	60	..	80	..	90	..	100	..		25.8	12.2
Canada	x		2.1	../3	18	../3	..	0	98	100	60	90	81	../3	1.7	..
Colombia	x		14	4	50	38	65	80	92	100	92	100	3.9	8	3.7/4	
Costa Rica	x		6.5	../5	23		82	80	95/2	100	18/2	80	80 /4	80/6	8.2	0
Chile	x		23	1	96/4	../7	90 /4/8	90/8	100/4	100	90/4	90	6 /4	6	4.9/4	5
Ecuador	x		19	8.5	59	30	1.5	80	60	100	40	90	..	201	5.5	
El Salvador	x		10		124		12		28		16		..		21.9	
United States		x	2.2	1.4	17	10	..	..	95-100	95-100	..		..		1.4	0.3
Guatemala	x		20	18	63	50	70	80	100	100	68	80	..		21.1	8.8
Guyana	x				25 /1	12.5/2										
Honduras	x		6.7	4.7	69	69	81	80	100	100	58	90	48	5	14.1	10
Jamaica		x	3.6		14	20	5	80	100	100						
Mexico	x		19	8.9	36	20	80 /4	80								
Nicaragua	x		5.9/2		72/10		0.6	80/11	100	100			3.7/4		12.3	15
Panama	x		16	6	107	30	46	80	49	90	95	96	..	90	0.8	0.6
Paraguay	x		25	12	142	70	11	80	100	100	95	90	30	80	16	10
Peru	x		27	10	145	80	27	60	58	100	51	90	2	9	3.9	3.7
Dom. Republic	x		5.7	2.8	32		7	80	65	90	70	90			8.0	5.0
Trinidad-Tobago	x		5.4	2.7	13	3	2	10	100	100	50	80	..		2.6	2.1
Venezuela	x		9.9	5.8	48	30	..		100	100	47	80	..		7.5	5.0

/1 In 21 capitals of States /2 1970 /3 Maintenance of trend /4 1974 /5 Reduction of mortality in children under 15 years by 80% /6 Over-15 years age group with respiratory symptoms /7 Reduction by 8% annually /8 Children under 15 years /9 196 cases in 1971 and 50% reduction by 1980 /10 1972 /11 Approximately

7. TUBERCULOSIS

REGIONAL GOALS: To reduce mortality from tuberculosis by between 50% and 65%. To vaccinate with BCG 80% of children under 15 years. To seek to treat all cases of tuberculosis discovered, using principally outpatient techniques and activities. To carry out bacilloscopic examinations of 60% to 75% of persons with respiratory symptoms lasting more than four weeks. All of these activities should be part of duly qualified general health services.

Despite the appreciable reductions achieved during the preceding decade, both in mortality and morbidity, tuberculosis continues to be an important health problem in the Region. It was so considered by 19 of the 22 countries which participated in the evaluation of the Ten-Year Plan. Estimated mortality rates per 100,000 inhabitants in 1971 were 2.2 for North America, 14.4 for Mesoamerica, and 20.8 for South America. During that same year the number of cases reported was over 118,000, yielding rates per 100,000 inhabitants of 17.2 for North America, 41.9 for Mesoamerica, and 69.5 for South America.

The mortality rate for 1971 reported by the 22 countries falls between a minimum figure of 2.1 per 100,000 and a maximum of 120 per 100,000, with an average of around 10 per 100,000. Nineteeen countries have set their goals for the reduction of these rates during the decade at proportions which range from 10% to 96%, and four out of five propose to achieve reductions equal to or greater than the regional goal of 50% to 65%.

The rates of incidence per 100,000 inhabitants show important discrepancies from the notified cases included in official publications. This can be explained by recalling that various countries have sought to make estimates more in line with the true levels of incidence and that the sources of information are not the same. In general, the discrepancies serve only to point out deficiencies in the existing systems of information. In addition, whatever the reported incidence may be, the countries have set for themselves rates of reduction for the decade which are plausible.

Twelve of the 18 countries which reported have set for themselves BCG vaccination goals of 80% of children under 15 years, coinciding with the proposed regional goal; one country hopes to achieve higher levels; three seek lower levels; and two do not have a policy of BCG vaccination.

Almost all of the countries propose that all new cases of tuberculosis should begin treatment using mainly outpatient techniques and activities. The proportion of new cases so treated in 1971 shows variations from 16% to 95%, with an average of 58%, in 15 of the countries which supplied information.

Information regarding bacilloscopic examinations of persons with respiratory symptoms of more than four weeks duration is not easy to obtain, and that is why an indicator was selected which called for the number of bacilloscopies per 100 patients over 15 years treated (for all causes) for the first time, which information has not been obtained by most of the countries.

The reduction of the proportion of beds devoted to the treatment of tuberculosis is an indicator of the emphasis given to outpatient care and to the better utilization of available beds for the general care of patients. Fourteen out of 15 reporting countries propose to make important reductions in this bed ratio.

B. COMMUNICABLE DISEASES (continued)

	8. Enteric diseases							9. Venereal diseases							
	Considered to be a problem		Deaths per 100,000 inhabitants			Deaths from diarrheal diseases in children 0-4 years, per 100,000 in this age group		Considered to be a problem		Cases of syphilis per 100,000 inhabitants		Cases of blenorrhagia per 100,000 inhabitants		Contacts investigated per 100 cases identified	
	Yes	No	1971	1980	% reduction	1971	1980	Yes	No	1971	1980	1971	1980	1971	1980
Barbados		x	3.0	4.0		11.5	22	x		174	217	527	517	..	
Bolivia	x		..			..		x		50		91			
Brazil	x		94 /1			..		x		..		..			
Canada	x		1.3	.. /2	.. /2	5.3	.. /2	x		12	.. /2	159	.. /2	..	
Colombia	x		77 /3	39	50	381 /3		x		69	80	179		..	
Costa Rica	x		69 /4	34	50	355	180	x		83	.. /2	179	.. /5	..	
Chile	x		40			3.5		x		12	13	..	.. /5	15 /6	20
Ecuador	x		121	60	50	..		x		24	16	74	40	20	80
El Salvador	x		123			482		x		262		235		33	
United States	x		13	7	50	6.5	3	x		12	7.5	308	340	73	80
Guatemala	x		259	194		821	616	x		29	10	73	30	0	10
Guyana	x		13 /7		50			x			.. /2				
Honduras	x		103	62	60	332	199	x		95	60	188	119		
Jamaica	x		36		..	192		x		140		1340			
Mexico	x		140	69	49	312	156	x		24	13	26	19	30	55
Nicaragua	x		193 /4	96	50	862 /4	430	x		84 /3	42	84 /3	42	0	
Panama	x		40	19	48	172	100	x		59	45	141	99		80
Paraguay	x		116	60	52	603	250	x		157	60	60	30	10	20
Peru	x		64	30	47	320	200	x		26	15	50	20	..	
Dom. Republic	x		51	17	30	274		x		169	.. /2	138	.. /5		
Trinidad-Tobago	x		27	13	50	22	10	x		52	58	848	250	97	100
Venezuela	x		48	30	62	280	150	x		110	187	334	298	2	2

/1 In 21 capitals of States /2 Maintenance of trend /3 1972 /4 1970 /5 Reduction
/6 1974 /7 100 cases in 1971

8. ENTERIC DISEASES

REGIONAL GOAL: To reduce the present mortality rates from enteric infections by at least 50%, especially among infants and children.

To judge from existing information and from that provided by the countries for the evaluation of the Ten-Year Plan, enteric diseases continue to be a group of very important afflictions, especially as regards their incidence on child mortality. With the exception of one country, all assign importance to this problem.

According to the reports from 21 countries, deaths from this group of diseases reached rates of between 1.3 and 259 per 100,000 inhabitants, with an average of 64 per 100,000. Thirteen countries have set reduction goals of around 50%, coinciding with the regional goal; two set lower goals; and the remaining countries did not indicate any goals.

As regards mortality among children under five years, the rates per 100,000 children of that age listed by 18 countries cover a range between 3.5 and over 800, with an average of around 300 per 100,000 children. The majority of the countries set their goals at important reductions in these rates, agreeing with the special emphasis on infants and children indicated in the regional goal.

9. VENEREAL DISEASES

REGIONAL GOAL: To reduce the incidence of venereal diseases, in particular gonococcal infections and syphilis.

All of the countries agree in recognizing venereal diseases as a national problem. During the period 1969-1972, an annual average of 185,718 cases of syphilis was notified in the Region; their distribution by subregions shows annual average rates of 42.1 per 100,000 inhabitants for North America, 49.8 per 100,000 for Mesoamerica, and 57.4 per 100,000 for South America. The decrease in these rates during the previous decade was constant and significant in North America; in Mesoamerica it was abrupt until 1968 and slight from then until 1972. In contrast, little change was noted in South America.

The rates per 100,000 inhabitants reported by 21 countries vary from 12 to 262 cases of syphilis and from 26 to 1,340 cases of gonococcal infections during 1971. Almost all of these countries have set as their goals a reduction of the rates in agreement with the regional goal. It is expected, nevertheless, that if consideration is to be given to reducing the cases, a greater effort will have to be made to improve the clinical services (diagnosis, treatment, search for cases, etc.) and the reporting and notification systems, which would make it possible to define the true situation.

B. COMMUNICABLE DISEASES (continued)

	10. Yaws				11. Pinta				12. Leprosy									
	Considered to be a problem		Number of cases		Considered to be a problem		Number of cases		Considered to be a problem		Number of new cases per 100,000 inhabitants		Number of cases registered per 100,000 inhabitants		Percentage of infectious cases under treatment		Percentage of contacts under surveillance & treatment	
	Yes	No	1971	1980	Yes	No	1971	1980	Yes	No	1971	1980	1971	1980	1971	1980	1971	1980
Barbados		x	0	0		x	0			x	0	0.4			100	100	..	
Bolivia		x	0	0	x		..		x		..	0.5	..	5			..	
Brazil	..	..			..	..	..		x		5.9/1	..	136.3		61			
Canada		x	0	0		x	0			x	0.04	.. /2	..	.. /2	..	100	..	
Colombia	x		18	0	x		..		x		..		1.59	1.3	..			
Costa Rica		x	0	0		x	0			x	1.04	.. /3	0.29	.. /3	100	100	71	80
Chile		x				x				x								
Ecuador	x		838 /4	0	x		..		x		4	1.9	30	25	70	100	40	75
El Salvador		x				x			x		0.08							
United States		x				x				x					100	100	50-60	75
Guatemala		x				x				x	..	6.3	3.5	11.3	25	75	0	75
Guyana		x				x			x		7.6	2.0	120	120	..		Min.	75
Honduras		x				x			x		6.3	3.8			100/4	100	100/4	100
Jamaica		x				x			x		0.8	83.2	20.5	85.5	38	80		60
Mexico		x				x	503	0	x		1.49	0.6	27.3	21.0	75	90	53	80
Nicaragua		x				x				x								
Panama		x				x			x		0.14	/2	11.0	/2	100	100	92	100
Paraguay		x				x			x		9.6	8.0	1.8	2.0	57	65	30	50
Peru		x	23	0	x		138	50	x		2.35	1.55	81 /5	60 /2	74	80	28	65
Dom. Republic		x	0	0		x			x		7.7	/2	41.4	/2	93	100	54	75
Trinidad-Tobago		x	26 /6	25 /6		x				x	6.39	7.1	120	91	80	95	..	75
Venezuela		x	0	0		x	0	0	x		4.1	3.5	170	169	87/4	100	47	75

/1 In 21 capitals of States /2 Maintenance of trend /3 Reduction /4 1974 /5 Prevalence of leprogenous areas /6 Latent cases only

10. YAWS

REGIONAL GOAL: Eradication.

Information available for 1971 indicates that yaws continues to be epidemic in the islands of the Caribbean and in parts of Bolivia, Brazil, Colombia, Ecuador, Guyana, Surinam, and Peru. This disease seems to have lost importance as a health problem, as it is recognized as such by only two countries. Those which set goals for 1980 propose to eradicate the disease. For this purpose, adequate clinical and epidemiological attention must be paid to the disease and better use must be made of the laboratory services, in order to determine the true seroepidemiological status of the disease.

11. PINTA

REGIONAL GOAL: Control and, if possible, eradication.

Four countries consider pinta as a health problem, although two countries alone monopolize the total of 641 cases reported in 1971. Of these, one proposes to achieve eradication and the other seeks a decrease of almost two-thirds in the number of cases by 1980.

12. LEPROSY

REGIONAL GOAL: To reduce the incidence and prevalence of leprosy, with a view to the consequent decrease in resultant disabilities.

Leprosy continues to be a problem in the Region. In 1971 there were a total of 195,234 cases recorded in 31 countries and territories, and 8,275 cases in 25 of them were notified. Of these cases, 54% were lepromatous, and it was estimated that 71.7% of the cases recorded were under control. The number of contacts reached 639,863, of which 36.9% were placed under surveillance.

Of the 22 countries reporting, 14 considered leprosy to be a national problem. The majority set as their goal the reduction of the incidence, although in very different proportions. Also, the majority set goals for reducing the prevalence, although some, in showing an increase for 1980, are actually pointing out that they hope to improve their disease registers, which were deficient in 1971.

Fifteen countries gave estimates of the proportion of infectious cases being treated in 1971, which varied from 25% to 100%, with an average of 80%. Fifteen countries set national goals for 1980 for this proportion, which varied from 65% to 100%, with an average value of 100%. The percentage of contacts under surveillance in 1971 shows great variation among the 12 countries which reported; in contrast, 14 countries set goals for themselves for 1980, ranging from 50% to 100%, with an average and mode of 75%.

B. COMMUNICABLE DISEASES (continued)

	13. Typhus				14. Schistosomiasis				15. Onchocerciasis			
	Considered to be a problem		Number of cases		Considered to be a problem		Known cases per 100,000 inhabitants		Considered to be a problem		New cases per 100,000 inhabitants	
	Yes	No	1971	1980	Yes	No	1971	1980	Yes	No	1971	1980
Barbados		x	0	0		x	0	0		x	0	0
Bolivia	x		14	0		x				x		
Brazil		x			x		.. /1			x		
Canada		x	0	.. /2		x	0	.. /2		x	0	.. /2
Colombia	..	..	0	0	..	..			..	..	..	
Costa Rica		x	0	0		x	0	0		x	0	0
Chile		x				x				x		
Ecuador	x		121/3	.. /2	x			.. /4	x		..	.. /4
El Salvador		x				x				x		
United States		x	0	0		x	0	0		x	0	0
Guatemala		x	13	0		x			x		236	199
Guyana		x				x				x		
Honduras		x				x				x		
Jamaica		x				x				x		
Mexico		x	0	0		x	0	0	x		631	180
Nicaragua		x				x				x		
Panama		x				x				x		
Paraguay		x				x				x		
Peru		x	79	1		x				x		
Dom. Republic		x	0	0	x		13	/5		x	0	0
Trinidad-Tobago		x				x				x		
Venezuela		x	0	0	x		10 /6	6.8	x		16.5	17.8

/1 Estimated at 6 million cases /2 Situation remaining stable /3 Figures being revised
/4 Decreased by 20% /5 Reduction /6 Prevalence high because of a study in 1971 of localities with high rate of infection

13. TYPHUS

REGIONAL GOAL: To reduce the incidence.

Louse-borne typhus continues to be an important endemic disease in the high plains of Bolivia, Ecuador, and Peru, as well as in some zones of Mesoamerica. Nevertheless, of four countries which reported cases in 1971 only two consider it to be a problem. Of the four countries, two propose to eradicate the disease by 1980; one intends to decrease it by 20%; and the other to decrease it to the minimum possible.

14. SCHISTOSOMIASIS

REGIONAL GOAL: To reduce the incidence.

Four countries assign importance to the problem of schistosomiasis. Three of them reported cases in 1971 (recorded or estimated), while one proposes to carry out prevalence surveys prior to a control program.

15. ONCHOCERCIASIS

REGIONAL GOAL: To reduce the incidence.

Onchocerciasis is endemic in three countries. All three assign importance to the problem, and two of them propose to decrease the incidence during the decade. A fourth country proposes, in addition, to investigate the prevalence and to develop control programs.

B. COMMUNICABLE DISEASES (continued)

	16. Chagas' disease				17. Jungle yellow fever						18. Plague			
	Considered to be a problem		Prevalence: Number of known cases per 100,000 inhabitants		Considered to be a problem		Number of cases		Existence of vaccination programs for exposed population		Considered to be a problem		Number of cases	
	Yes	No	1971	1980	Yes	No	1971	1980	1971	1980	Yes	No	1971	1980
Barbados		x	0	0		x	0	0				x	0	0
Bolivia	x		..		x		8		x	x	x		15	
Brazil	x		.. /1		x		11		x	x	x		146	
Canada		x	0	.. /2		x	0	.. /2	-	-		x	0	.. /2
Colombia	..	..			x		2	0	x	x	..	..	0	0
Costa Rica		x	.. /3	.. /3		x	0	0	-	-		x	0	0
Chile		x		.. /4		x						x		
Ecuador	x		..	..	x		3	3	-	x	x		27	0
El Salvador	x		3,71			x	0	0	-	-		x		
United States		x	0	0		x	0	0	x	x		x	2	.. /2
Guatemala	x		28	20		x						x		
Guyana		x				x						x		
Honduras	x					x						x		
Jamaica		x			x		0	0	-	x		x	0	0
Mexico		x	0	0		x	0	0	-	/5		x	0	0
Nicaragua		x				x						x		
Panama		x			..	..			/6	/6		x		
Paraguay	x		1,4	1	x		0	0	-	x		x		
Peru	x/7		4	4	x		35	3	x	x	x		53	8
Dom. Republic		x	0	0		x			-	-		x	0	0
Trinidad-Tobago		x				x	0	0	-	-		x		
Venezuela	x		2825 /8	2253 /8	x		0 /9	0	x	x	x		0	0

/1 Estimated at 3 million cases /2 Maintenance of situation /3 Requires further study
/4 Decreased by 20% /5 Control and surveillance /6 Steady /7 Under study /8 Estimated figures from surveys made /9 28 deaths recorded in 1972 and 1973

16. CHAGAS' DISEASE

REGIONAL GOAL: To reduce the incidence and to carry out studies to learn more about its frequency and distribution. To stimulate programs for its control.

Cases of Chagas' disease, a disease which is broadly distributed in extensive rural areas, occur in the majority of the countries of Mesoamerica and South America. It is estimated that the number of persons infected reaches 7,000,000 in the Region. It is difficult to present an accurate panorama of the epidemiology of the disease, since data on its prevalence and morbidity are incomplete and fragmentary, as can be seen from the replies given by 22 countries on the evaluation form. Nine countries consider that Chagas' disease is an important health problem. There are important programs of epidemiological research in at least 12 countries, and control campaigns in six.

17. JUNGLE YELLOW FEVER

REGIONAL GOAL: To reduce to a minimum the morbidity and mortality from jungle yellow fever.

Since 1954, cases of yellow fever have been observed only in their jungle form in nine countries of the Region. According to reports from the 22 countries, jungle yellow fever is viewed as an important problem in only eight. Five countries report the appearance of cases during 1971, and all of them propose to reduce the problem to a minimum by 1980, through the development and activation of programs to vaccinate the exposed populations in the endemic areas.

18. PLAGUE

REGIONAL GOAL: To keep the enzootic plague areas under control.

The endemic zone of plague in the Americas is limited to the western one-third of the United States of America, the border region between Ecuador and Peru, southwestern Bolivia, and part of the Northeast of Brazil. It was in these countries that cases were reported in 1971, and in four of them the disease is assigned importance as a health problem. All of them propose to reduce the incidence by 1980 through control programs in the enzootic areas.

B. COMMUNICABLE DISEASES (continued)

19. Malaria

	Considered to be a problem		Cases per 100,000 inhabitants		Population living in originally malarious areas									
					Areas where eradication had been achieved in 1971		Areas with good prospects for eradication with existing resources		Areas where no satisfactory progress has been made due to financial problems			Areas where progress depends on solution of serious operational and technical problems		
					1,000's of inhabitants 1971	% of this population in maintenance phase 1980	1,000's of inhabitants 1971	% of this population for which eradication assured 1980	1,000's of inhabitants 1971	% with transmission interrupted by 1980	% with transmission focalized by 1980	1,000's of inhabitants	Cases per 100,000 inhabitants	
	Yes	No	1971	1980									1971	1980
Barbados		x	-		0	-	-	-	0	-	-	0	-	-
Bolivia	x		494	49	0 /2	-	-/5	100	973 /2	..	..	662/5	-	-
Brazil	x		189	50	19931	100	12070	100	0	-	-	8165	654	230
Canada		x	0											
Colombia	x		175	86	0	-	8650	54	3500	19	81	664	1639	877
Costa Rica	x		45	14 /4	0	0	568	100	0	-	-	0	-	-
Chile		x	-		169/2	..								
Ecuador	x		274	17	0	-	1325	100	1810	100	-	214	1798	200
El Salvador	x		1271				0/2	-	2329/2	-	100 /2	807	..	
United States		x	1/4		56471	..								
Guatemala	x		338	0	0	-	1374	100	0	-	-	1062	..	
Guyana	x		4/4		736	100	0	-	0	-	-	0	-	-
Honduras	x		1981	100	0	-	413	100	1534	50	29	195	18985	1333
Jamaica		x	-											
Mexico	..	..	85/4		0	-	11260/2	..	8894/5	..	..	4093/2	..	..
Nicaragua	x		13	4	0	-	78	100	545	0	80	1289	12.9/3	4.0/3
Panama	x		70/4		0	-	1420	100	0	-	-	0	-	-
Paraguay	x		20	10	0	-	2021	100	0	-	-	0	-	-
Peru	x		84	9	1399	100	2354	100	1100	80	20	90	1352	36
Dom. Republic	x		7	0	3593	100	390	100	0	-	-	0	-	-
Trinidad-Tobago		x	0/4		1018	..								
Venezuela	x		214/4	0	7489	100	0	-	0	-	-	473	..	4.0/3

/1 Imported cases /2 1974 /3 Annual incidence of parasitism per 1,000 inhabitants
/4 Source: Health Conditions in the Americas, 1969-1972, PAHO /5 Source: Report of the Division of Disease Control for the Annual Report of the Director, 1971

19. MALARIA

REGIONAL GOALS: To prevent the reintroduction of malaria into the areas, with 81.1 million inhabitants, from which it has been eradicated. To achieve eradication in areas with 74.5 million inhabitants where there are good prospects of doing so with available resources. To interrupt or focalize transmission in areas, with 12.4 million inhabitants, in which satisfactory progress has not been achieved because of financial problems. To reduce transmission to the lowest possible levels in areas, with 17.3 million inhabitants, where progress depends on the solution of serious operational and technical problems.

Of the 34 countries of the Americas which had originally malarial areas, 12 had achieved eradication by 1971, and two were in the consolidation phase for their entire territory. The 20 remaining countries were applying the attack phase, to varying degrees, in the areas still affected. Antimalarial campaigns have achieved a considerable reduction in morbidity, and malaria is no longer an important cause of death in the Hemisphere.

According to the replies to the evaluation questionnaire, 15 countries of the 22 which replied consider malaria to be an important problem and 17 of them reported cases during 1971.

Of the population which lived in originally malarial areas, 43.8%--that is, around 81 million inhabitants--lived in areas which by 1971 had reached the maintenance phase of the program; 23.5%, or about 43.6 million inhabitants, lived in areas in the consolidation phase; and 32.6%, or 60.4 million inhabitants, lived in areas which were in the attack phase. Only 0.1%, or 146,000 persons, lived in areas which were still in the preparatory phase.

According to reports from the countries for the evaluation of the Ten-Year Plan, it is proposed that all of the population living in areas where eradication had already been achieved by 1971 should be in the maintenance phase of eradication by 1980. In practically all of the countries with people living in areas where there are good prospects for eradication with available resources, it is hoped that eradication will have been achieved by 1980. Even in areas where satisfactory progress has not been made because of financial problems, transmission should have been interrupted or focalized by 1980 for 100% of the population in four countries, and for 80% in another two. Finally, in one-half of the 22 reporting countries there are almost 18 million inhabitants who live in areas where the program depends on the solving of serious operational and technical problems. Even in these areas, all of the countries propose to achieve important reductions in incidence by 1980.

B. COMMUNICABLE DISEASES (conclusion)

	20. Aedes aegypti										
	Area originally infested										
	Considered to be a problem		Thousands of square kilometers	Area in maintenance phase %		Area in consolidation phase %		Area in attack phase %		Area in preparatory phase %	
	Yes	No		1971	1980	1971	1980	1971	1980	1971	1980
Barbados	x		0.2 *					100 *			
Bolivia		x	600								
Brazil		x	5359 *	100	100	-	-	-	-	-	-
Canada		x									
Colombia	x		280	0	60	0	40	20	0	10	0
Costa Rica		x	20	-	100	-	-	100	-	-	-
Chile		x	100 *								
Ecuador		x	68	100	100						
El Salvador	x		19					* /1			
United States		x	1537 *	100	100						
Guatemala	x		37	-	100	100	-	-	-	-	-
Guyana	x		13		100	..	-	0.12	-	..	-
Honduras	x		65	-	-	-	95	1	5	-	-
Jamaica	x		11	-	25	-	75	-	-	-	-
Mexico	x		1000	98	100	-	-	2	-	-	-
Nicaragua											
Panama	x		56 *			100 *					
Paraguay		x	200 *	100	100	-	-	-	-	-	-
Peru		x	638	100	100	-	-	-	-	-	-
Dom. Republic	x		42 *	0 *		0 *		0 *		0 *	
Trinidad-Tobago	x		3 *	100	100	-	-	-	-	-	-
Venezuela	x		710 *					* /2			

* Source: Annual Report of the Director, PAHO, 1971
/1 Reinfested, limited attack phase /2 Infested, limited attack phase

20. AEDES AEGYPTI

REGIONAL GOAL: To eradicate Aedes aegypti in the countries and territories which are still infested, and to avoid its penetration into those where it has been eliminated.

According to available information, in 1971 the status of the programs for the eradication of Aedes aegypti was as follows: of the total of 46 countries and territories of the area originally infested, 32 (or 78% of the total) had programs under way; of the 14 remaining, six were organizing their programs, seven had no activity in operation, and for one no information was available.

The state of progress of the active programs was as follows: six countries and territories had attained the maintenance phase and continued with adequate surveillance; another four had also achieved this phase, but their surveillance activities were not considered to be adequate; two political units were in the consolidation phase, and in both cases the verification was considered to be adequate; eight countries and territories, including two with foci of reinfestation, were in the attack phase and were receiving an adequate coverage under their programs; another eleven, also in this phase, did not yet have adequate coverage; three political units were still in the preparatory phase, two with adequate coverage and one which needed to intensify its activities.

C. MATERNAL AND CHILD HEALTH AND FAMILY WELFARE

	1.1 Infant mortality			1.2 Mortality in 1-4 years age group			1.3 Maternal mortality		
	Deaths per 1,000 live births in infants under 1 year		% reduction in the period 1971-1980	Deaths of children 1-4, per 1,000 in this age group		% reduction in the period 1971-1980	Maternal deaths per 1,000 live births		% reduction in the period 1971-1980
	1971	1980		1971	1980		1971	1980	
Barbados	29.2	32.4	10 /5	1.2	1.2	0	1.4	1.0	30
Bolivia	154.6	30.0	80	33.9	23.8	30	4.8	3.8	21
Brazil	105	70	33	60	30	50	3.0	1.8	40
Canada	17.5	13.5	23	0.83	0.71	14	0.18	0.06	67
Colombia	67						2.3		
Costa Rica	56.5	42-49	30-40	4.3	1.9-2.4	50-60	1.0		.. /4
Chile	70.5	40.0	46	2.9	1.8	38	1.6	0.91	43
Ecuador	78.5	47.1	40	15.7	6.3	60	2.0	1.2	40
El Salvador	52.4			8.7			1.0		
United States	19.1	14.5 /1	24 /2	0.8 /1	0.7	12 /2	0.2	0.1 /1	50 /2
Guatemala	89	71.2	20	24	12	50	2	1.6	20
Guyana	33.6		25	3.2			0.7		40
Honduras	117.6	85	28	20.7	10.4	50	2.7	1.6	40
Jamaica	27.1		40	19.6		60	1.5		30
Mexico	66	44.4	33	10.1	5.6	45	1.38	0.93	33
Nicaragua	50.8 /3		30	9.7 /3		40	1.6 /3		30
Panama	37.6	18.8	50	7.4	4.4	40	1.1	0.5	55
Paraguay	94.2	66.0	30	7.2	2.9	60	5.6	3.4	40
Peru	53.0	50.6	5	6.3	5.5	13	1.0	1.0	0
Dom. Republic	48.8	37.5	23	6.0	3.6	40	1.0	0.7	30
Trinidad-Tobago	29	20	31	2.1	1.0	50	1.4	1.0	30
Venezuela	48.7	42.4	13	5.0	4.2	16	0.9	0.7	20

/1 Projection for 1977 /2 Period 1971-1977 /3 1970 /4 Reduction "SAE" /5 Estimated on an average rate for 1970-1972 of 36.1 per 1,000, since the rate for 1971 was abnormally low

1.1 Infant mortality

REGIONAL GOAL: To reduce by 40% the mortality among children under one year of age, within a range between 30% and 50%.

Infant mortality remained at relatively high levels during the previous decade in the majority of the countries of the Region, aside from the known fact that in this age group there are significant deficiencies in the recording of deaths which would imply an understating of the true figures. In North America, where infant mortality was kept practically stationary during the decade of the 1950's and the beginning of the 1960's at a level of around 25 per 1,000 live births, a sustained decrease began which reduced the rate from 26.2 to 19.0 per 1,000 live births between 1960 and 1971 (27%). For Mesoamerica, the rates recorded in 1960 and 1971, respectively, were 70.4 and 57.7 per 1,000 live births (a reduction of 18%). For South America the respective figures for 1960 and 1971 were 84.9 and 64.7 per 1,000 live births (that is, a reduction of 24%).

The proposed regional goal will demand a considerable effort on the part of the countries, particularly if it is kept in mind that the true levels of infant mortality may be higher than those recorded. Nevertheless, despite the magnitude of the problem, of the 20 countries which listed goals for decreases, nine set them below the regional goal and another five set goals at levels below the range of 30% to 50%.

1.2 Mortality among children 1-4 years of age

REGIONAL GOAL: To reduce mortality among children 1-4 years of age by 60%, within a range between 50% and 70%.

During the previous decade, there was greater success in reducing the mortality of the 1-4-year age group than for infant mortality. In fact, between 1960 and 1972 the mortality rate in North America was reduced from 1.1 to 0.8 deaths per 1,000 inhabitants (a reduction of approximately 27%); in Mesoamerica the rate dropped from 12.2 to 8.2 deaths per 1,000 (a reduction of 33%); and in South America the reduction between 1960 and 1971 was from 11.8 to 6.5 per 1,000 (45%). The regional goal seeks to surpass these achievements; however, of the 19 countries which set goals for 1980, only eight adopted the regional goal, and the average reduction expected is 45%. Under these conditions it will be difficult to attain the proposed regional goal.

1.3 Maternal mortality

REGIONAL GOAL: To reduce maternal mortality by 40%, within a range between 30% and 50%.

Between 1960 and 1971 the number of maternal deaths per 1,000 live births went down from 3.8 to 1.9 in North America, from 18.2 to 13.3 in Mesoamerica, and from 20.0 to 17.1 in South America, corresponding to reductions of 50%, 27%, and 14.5%, respectively. The regional goal of 30% to 50% reduction is considerably higher than these figures, and four of five countries have adopted this goal.

C. MATERNAL AND CHILD HEALTH AND FAMILY WELFARE (continued)

	2. Coverage of services									
	2.1 Percentage of pregnant mothers receiving prenatal care		2.2 Percentage of deliveries attended in hospitals		2.3 Percentage of postpartum cases under control		2.4 Percentage of infants under 1 year under control		2.5 Percentage of children 1-4 years under control	
	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980
Barbados	81.5	98.6	91.3	99	42.4	54.8				
Bolivia	3.1	50		60		30	18.5	60	6.7	50
Brazil		50		50		20		60		50
Canada	80	95	99.6	99.7			80	90	80	90
Colombia	37	70			8 /1	60	49	90	20	60
Costa Rica	53.2	75	74.2	85	4	40	16	90	16	50-70
Chile	56 /1	80	87.2 /1	90	54 /1	80		90		70
Ecuador	31.3	60	22.2	60	8.7	60	41.5	90	10.6	50
El Salvador	13.6		26.6		3.3		31.1		5.1	
United States	98.4	98.7 /2	99.1	99.5 /2	86.7 /3				87.0	92 /2
Guatemala	15	50	15	30	5	50	15	60	15	40
Guyana	51	90					27		27	
Honduras	26.8	50	20	40	2.1	8	46.8	70	19.6	35
Jamaica	55	60	50	80			44			
Mexico	30	65	45	75	25	65	30	60	20	50
Nicaragua	19.1	60	31.1	50			30.0	70	10.6	50
Panama	28.6	60	62.8	80	7.4	30	23.5	65	7.0	50
Paraguay	43.5	60	34.4	60	5.9	20	34.1	62	10.5	29
Peru	20	60	21	60	5	30	38	75	16	50
Dom. Republic	25	50	49	60	5	50	20	50	15	50
Trinidad-Tobago	80	100	80	85	20 /1	60	42	90	30	70
Venezuela	27.8	55.4	95.6	100	21.1	50	28.3 /4	60 /4	2.8 /5	20 /5

/1 1974 /2 Projection for 1977 /3 Legitimate children only /4 Children under 2 years
/5 From 2 to 6 years

2. COVERAGE OF SERVICES

REGIONAL GOALS: To achieve a coverage of 60% for prenatal care, of 60% to 90% for adequate care at delivery, and of 60% for postpartum care. To achieve a coverage of 90% care for children under one year, of 50% to 70% for those from one to four years, and of 50% for those five years of age.

2.1 Prenatal care

The scope of maternal-infant health programs was limited in 1971, and the activities carried out did not in general have the continuity and efficiency desired. The proportion of pregnant mothers receiving prenatal care in the 21 reporting countries varied from 3.1% to 98.4%, with an average around 31%. Six countries set goals at raising prenatal care coverage to between 50% and 55%, and all the rest adopted goals equal to or higher than the regional goal.

2.2 Care at delivery

Hospital care during delivery has been selected as an indicator of adequate care. The data provided by 18 countries show a range from 15% to 99.6% of deliveries under hospital care, with an average of 47%. All of the countries have set goals to increase this proportion, and four-fifths of them have adopted the regional goal of between 60% and 90%.

2.3 Postpartum care

The proportion of postpartum mothers receiving care in 1971 shows great variation among the countries of the Region. In 16 countries which provided information, that proportion varied from 2.1% to 86.7%. Almost two-thirds of the countries submitted figures which show less than 10% of postpartum mothers receiving care. All of the countries set goals to increase this proportion, but only one out of three has adopted the regional goal or has set higher levels.

2.4 Care of children under one year of age

In 1971 the proportion of infants under one year of age who were under care varied from 15% to 80% in 18 reporting countries, with an average around 30%. All of the countries have set goals for increasing these percentages; only one out of three has set a goal which coincides with the regional goal.

2.5 Care of children 1-4 years of age

According to the replies from 18 countries, the proportion of children 1-4 years of age under care in 1971 varied from 5.1% to 87%, with an average around 15%. The goals for increasing this proportion coincide with the regional goal in two out of three countries.

C. MATERNAL AND CHILD HEALTH AND FAMILY WELFARE (conclusion)

	3. Intersectoral policy and coordination												
	3.1 Intersectoral policy for protection of the family, maternity and infancy					3.2 Intersectoral coordination for achievement of specific programs				3.3 Information and services on problems related to fertility and sterility			
	Defined	Not well defined	Does not exist	Under study	Not reported	Adequate	Partial	Slight	Not reported	Available	Not available	Initiation or intensification planned	Not reported
Barbados		x					x			x			
Bolivia				x			x			x			
Brazil				x			x						x
Canada		x				x				x			
Colombia		x					x			x			
Costa Rica		x					x			x			
Chile		x					x			x			
Ecuador		x						x		x			
El Salvador					x				x				x
United States					x				x				x
Guatemala				x			x			x			
Guyana	x						x				x		
Honduras					x			x		x			
Jamaica					x				x				x
Mexico	x					x				x			
Nicaragua	x						x			x			
Panama	x						x			x			
Paraguay		x		x			x			x			
Peru							x				x		
Dom. Republic		x						x		x			
Trinidad-Tobago		x				x				x			
Venezuela		x						x				x	

3. INTERSECTORAL POLICY AND COORDINATION

REGIONAL GOALS: To formulate an intersectoral policy for protection of the family, mothers, and children which would include guarantees of their civil and legal rights and protection of their economic and working rights. To provide adequate information and services related to fertility and sterility whenever the national policies permit this.

3.1 Intersectoral policy

Activities in the field of protection of the family, mothers, and children call for a national policy which necessarily must be intersectoral. According to data from the 22 reporting countries, only four of them had adequately defined such a policy in 1971; in 10 countries it was not well defined; and in four it was under study.

3.2 Intersectoral coordination

Activities in the field of maternal and child health and of family welfare will require, in addition to a formulated policy, the mechanisms for implementing it; the more closely coordinated the interested sectors within the framework of specific programs, the more efficient these mechanisms will be. Even if a national policy has not been clearly formulated, a fluid intersectoral coordination can achieve important results. According to the statements of 19 countries, the situation in 1971 was in general one of partial intersectoral coordination. Only in three countries was such coordination considered adequate, and in another four it was very rare.

3.3 Information and services related to problems of fertility and sterility

According to the recommendations of the Ten-Year Plan, the countries should establish plans and measures aimed at the overall protection of the family, including, when national policies so permit, adequate information and services related to fertility and sterility. According to replies from 18 countries, such services were already being offered in 1971 in 15 countries, and in one of them initiation or intensification thereof was planned.

D. NUTRITION

	1. Protein-calorie malnutrition						2. Nutritional anemias			3. Endemic goiter				
	Percentage of children under 5 years with grade II protein-calorie malnutrition			Percentage of children under 5 with grade III protein-calorie malnutrion			Percentage of pregnant women with nutritional anemias			Prevalence of goiter (%)			Prevalence of cretinism (per 100,000 inhabitants)	
	1971	1980	% of reduction	1971	1980	% of reduction	1971	1980	% of reduction	1971	1980	% of reduction	1971	1980
Barbados	39.3/1			49 /1										
Bolivia	8.9	3		1.5	0.6				30	..	25		..	
Brazil	22			11										
Canada	0	0		0	0		0.3			0	0		0	
Colombia	19.3		30	1.7		30				/2				
Costa Rica	12.2/3	8.5	30	1.5 /2	0.2	85	33/3		30	18/3		10	..	
Chile	2.6/4	2.1	20	0.8 /4	0.4	50	..			..			..	
Ecuador	9.6	8.5	11	1.2	0.7	40	..			22.9	15.0	34		
El Salvador	22.6			3.0						48				
United States	2.0			0.1			30	10		10			0.1%	
Guatemala	26		30	6		50	46		25	5	5			
Guyana	.. /2			.. /2			50							
Honduras	27.2	20.4	25	2.3	0.5	80	45	36	20	17	10	40		
Jamaica	9	4	56	1.4	0.5	64	45	20	56	.. /6			.. /6	
Mexico	7			2.5	1.5	40	33	16		10	5		440	
Nicaragua	22.8/2		10	3.1 /2		75	70 /2		30	32		60	..	
Panama	10.8/7		30	1.1		75	..			16.5	5		..	0
Paraguay	8.1	5	40	2.5	1.5	40	..			13.9	5	64	..	
Peru	13.1	9.2	30	0.9	0.3	68	14/4	10		22	16		2.6	1.5
Dom. Republic	22		40	4		100	..			9.1			..	
Trinidad-Tobago	.. /8			.. /9			26	18	30	10	10	-	0 /9	0
Venezuela	14.5			0.9						13.5				

/1 Percentage of 92 children admitted in the National Nutrition Institute /2 Does not constitute a problem because of salt iodization /3 1966 /4 1974 /5 12.5% grade II and III /6 No clinical problems /7 1967 /8 1.5 for grades II and III in 1974; 50% reduction proposed by 1980 /9 Absolute figure, 7 cases

1. PROTEIN-CALORIE MALNUTRITION

REGIONAL GOALS: To reduce grade II protein-calorie malnutrition in children under five years by 30%, within a range between 10% and 50%. To reduce grade III protein-calorie malnutrition in children under five years by 85%, within a range between 75% and 95%.

Thirteen countries set goals for reducing grade II protein-calorie malnutrition which coincide with the regional goal. Fourteen countries set goals for grade III protein-calorie malnutrition, five of them at amounts which range from 30% to 68%. To achieve these goals will call for intensifying intersectoral programs which increase the production, availability, consumption, and utilization of basic foods, and for integrating nutritional activities as a priority component of health services. In addition, the industrial production of baby foods of high nutritional value should be achieved.

2. NUTRITIONAL ANEMIAS

REGIONAL GOAL: Reduction by 30%.

Information regarding nutritional anemia in pregnant women is deficient. Only 11 countries provided figures for 1971, with percentages which ranged from 0.3% to 70%, and an average of 33%. Seven countries set goals for reduction, of which two were below the regional goal. To decrease this problem will call for specific programs for fortifying foods with iron salts, as is being done in some countries, and for health services to provide iron and folate supplements to vulnerable groups under their care.

3. ENDEMIC GOITER

REGIONAL GOALS: To reduce prevalence to below 10%. To eliminate cretinism.

Of 18 reporting countries, five indicated prevalences below 10% in 1971; 12 placed it between 10% and 48%; and one stated that there were no clinical problems. Only five countries set reduction goals for 1980, with values ranging from 10% to 64%.

Information regarding cretinism is very sparse. Only two countries propose its elimination, and one plans to reduce it by more than 50% by 1980.

The coverage of salt iodization programs should be increased, and the quality control of the industrial process should be improved. In those countries with a high prevalence of endemic goiter and cretinism, where iodized salt is not used because of geographic reasons, injections of iodized oil could be used, as is done in some countries of the Andean Area.

D. NUTRITION (continued)

	4. Hypovitaminosis A			5. Biologically oriented national policy for food and nutrition				6. Food supplement programs: Coverage of most vulnerable groups			
	Prevalence of hypovitaminosis A (%)										
	1971	1980	% of reduction	Exists	Does not exist	Under study	Proposed as a goal	Yes: adequate	Yes, but inadequate	No programs	Proposed as a goal
Barbados						x	x		x		x
Bolivia	..					x			x		
Brazil						x			x		
Canada	0.1					x			x		
Colombia						x			x		
Costa Rica	51 /1				x		x		x		
Chile	..			x				x			
Ecuador	..					x		x			
El Salvador	22.5					x			x		
United States	1.0					x			x		
Guatemala	19		75			x			x		
Guyana	43.9					x			x		
Honduras	21			x					x		
Jamaica	..			x					x		
Mexico	..			x					x		
Nicaragua	..					x			x		
Panama	..				x		x		x		
Paraguay	24.2	18	25	x			x /2		x		
Peru	..			x					x		
Dom. Republic	..				x				x		
Trinidad-Tobago	..					x			x		
Venezuela	/3					x			x		

/1 1966 /2 Revision proposed /3 No serious problems

4. HYPOVITAMINOSIS A

REGIONAL GOAL: Reduction by 30% for the Region and by 10% to 50% for the countries.

Only eight countries gave any indication of the prevalence of hypovitaminosis A at the beginning of the decade, with values which ranged from 0.1% to 51%, and an average of 22%. Only two countries set reduction goals: of 25% and 75%, respectively. The fortifying of sugar with vitamin A has been started in some countries, and others are studying this possibility.

5. BIOLOGICALLY ORIENTED NATIONAL FOOD AND NUTRITION POLICY

REGIONAL GOAL: The adoption by each country of a biologically oriented national policy for food and nutrition, and the development of coordinated intersectoral programs within this framework.

Six countries stated that they now have a biologically oriented policy; in 13 countries such a policy is under study; and in the other three there is none. The organizing of multidisciplinary technical groups in the national planning units of some countries has made it possible to formulate food and nutritional policies and plans of an intersectoral scope in order to improve the availability and consumption of foods and the optimum utilization of nutrients through programs for the prevention and control of severe infectious diseases.

6. FOOD SUPPLEMENT PROGRAMS

There are food supplement programs oriented to the coverage of the more vulnerable groups in the 22 reporting countries; nevertheless, only two of these countries stated that such programs are adequate, while the other 20 countries believe that the coverage is inadequate. Some countries are making efforts to improve said coverage, using food mixtures of high nutritional value which are produced locally.

It is necessary to intensify the coordination of the international and bilateral food assistance programs to make their cooperation with the countries more effective. In particular, recourse to the World Food Program (WFP) can be taken for activities of this sort.

D. NUTRITION (conclusion)

	7. Salt iodization and iodized oil programs			8. Technical nutrition units						
				8.1 At the central level			8.2 At intermediate levels			
	Exist	Do not exist	Under study	Exist	Do not exist	Should be strengthened	Exist in all	Exist in some	Do not exist	Should be expanded and strengthened
Barbados		x		x						x
Bolivia			x	x			x			
Brazil	x			x		x		x		x
Canada	x			x		x	x			x
Colombia	x			x		x		x		x
Costa Rica			x	x				x		
Chile	x			x			x			
Ecuador	x			x				x		
El Salvador	x			x		x	x			x
United States	x					x				x
Guatemala	x					x				x
Guyana		x				x				x
Honduras	x			x		x		x		x
Jamaica		x		x		x			x	
Mexico	x			x				x		
Nicaragua			x	x				x		
Panama	x			x				x		x
Paraguay	x			x		x			x	
Peru	x			x					x	
Dom. Republic	x			x					x	
Trinidad-Tobago		x				x				x
Venezuela	x			x		x	x			x

7. IODIZED SALT AND IODIZED OIL PROGRAMS

There are such programs in 17 of the 22 reporting countries, and in another three they are under study. It would be desirable for the legislation on this subject to be reviewed, the regulations brought up to date, and the quality controls improved in those countries which have programs in operation.

8. TECHNICAL NUTRITION UNITS

REGIONAL GOAL: The organizing of units on a central level and on the intermediate or regional level.

There are technical units at a central level in 18 of the 22 reporting countries, but in 12 of them such units should be strengthened. Only five countries stated they have units at all intermediate levels of operation, while another eight countries have such units at some levels. Almost all of the countries indicate the need for broadening and strengthening these units.

The existing units will need a greater technical preparation through the training of staff specialized in nutrition and dietetics. In this way it will be possible to achieve the incorporating of nutritional activities into the general health services, and in particular into those concerned with maternal-infant care.

E. OTHER AREAS

	1. Chronic diseases		2. Cancer													
					2.1 Uterine cancer detection programs					2.2 2.2 Breast cancer detection programs					2.3 Register of tumors: Percentage of specialized and general hospitals with more than 200 beds having register	
	Goals established in this area		Goals established in this area		Exist	Do not exist	Projected	Annual cytological examinations per 100 women over 20 years		Exist	Do not exist	Projected	Annual examinations per 100 women 20 years and over			
	Yes	No	Yes	No				1971	1980				1971	1980	1971	1980
Barbados	X		X		X			10.2			X				25	25
Bolivia		X		X		X					X				0	
Brazil		X	X		X			..		X					/3	
Canada		X		X		X					X					
Colombia	X		X		X			5			X				20/4	100
Costa Rica	X		X		X			5.8	15	X			0.7		20/1	100
Chile	X		X		X			8.5			X				2.4	2.8
Ecuador	X		X		X			1.4	25		X					
El Salvador	..	..		X			X	4.9			X					
United States	X		X		X			..		X					.. /4	
Guatemala		X		X								X				
Guyana		X		X			X				X					
Honduras		X		X	X			..			X				-	
Jamaica	X			X		X					X				-	
Mexico	X		X		X				62	X				62		100
Nicaragua	X		X		X			3			X					
Panama	X		X		X			5	25			X			25	43
Paraguay		X	X		X			..		X			..		-	
Peru	X		X		X			4	64		X				6	10
Dom. Republic	X			X	X			..		X			..		0	
Trinidad-Tobago		X	X		X			0	5		X				-	
Venezuela	X		X		X			6	15	X			2	10	10	80

/1 1974 /2 1972 /3 Central register in each province /4 Between 800 and 900 hospitals maintain registers

1. CHRONIC DISEASES

REGIONAL GOALS: To decrease the incidence of chronic diseases susceptible to prevention. To stimulate early diagnosis and timely treatment of chronic illnesses. To attend to all spontaneous demand for services for this type of malady, including the suburban and rural areas insofar as possible. To carry out epidemiological research which will make it possible to learn more about the problem, in order to plan adequately the resources for programs of control.

With regard to chronic diseases in general, the investigation was concerned only with whether the countries had set goals in this area for 1980. Of the 22 countries which replied, 13 stated they had set goals of some sort for attacking chronic diseases. It is known that some countries are carrying out very important activities in this regard. Everything seems to indicate that the countries are conscious of the increasing importance which chronic diseases are acquiring as health problems.

2. CANCER

REGIONAL GOALS: To reduce case fatality rates from cervical, uterine, breast, and laryngeal cancer, and from other neoplasms in which early diagnosis and timely treatment make such reduction possible. To conduct epidemiologic research for the purpose of identifying the causal agents of the various types of cancer, and in particular the environmental, nutritional, and genetic factors associated with gastrointestinal cancer.

As regards cancer, 14 countries have set goals involving various types of cancer control activities. In particular, attention was focused on two indicators of endeavors, i.e., programs to detect uterine and breast cancer, because for these--particularly for the former--there are effective control programs. There is evident interest on the part of the countries in uterine cancer detection programs. Only three countries do not have this type of program, while in the others such programs are either in existence or projected.

Breast cancer detection programs exist only in seven countries and are projected in two more.

The inadequacy of information on the coverage of these programs was evident, and they should be statistically strengthened. Regarding the existence of tumor registers, it was thought that an appropriate indicator might be the number of hospitals which specialize in oncology and of general hospitals with more than 200 beds which have tumor registers. The highest percentage of such hospitals with a register is 25%, and various countries propose to achieve better coverage by 1980.

E. OTHER AREAS (conclusion)

	3. Mental diseases						4. Alcoholism		5. Use of drugs causing dependency		6. Dental health									
	Goals have been established		Psychiatric beds per 1,000 inhabitants		% of psychiatric beds in general hospitals		Goals established in this area		Goals established in this area		Goals have been established		Programs for integration of dental health according to different levels of care			Expansion of coverage with emphasis on care of children		Cities of 50,000 or more inhab.			
																		Number		No. of these with water fluoridation programs	
	Yes	No	1971	1980	1971	1980	Yes	No	Yes	No	Yes	No	Defined	Not well defined	Projected	Not projected	Projected	1971	1980	1971	1980
Barbados	x		2.7		0			x		x	x		x				x	0	0	0	0
Bolivia		x	0.1	0.0	0.01	0.05		x		x		x	x			x		5	7	0	0
Brazil	x		0.87				x		x		x				x		x	121	130	17	99
Canada																					
Colombia	x		0.2	0.7	1.5/4	5	x		x		x		x				x	46		2	
Costa Rica	x		0.78	0.77	/2	/2	x		x		x				x		x	1	1	0	1
Chile		x	0.45		1.2		x			x	x		x				x	14	22	50*	109*
Ecuador		x	0.09	0.15	4.3	4.9		x	x		x		x				x				
El Salvador	..	..	0.19		-		..	..	..	..	x		x				x	3	5		
United States	x		2.26		5		x		x			x		x			x	515		257	295
Guatemala	x		0.01	0.01	-		x			x	x		x				x	4	4	0	
Guyana		x	0.64					x		x	x			x			x				
Honduras	x		0.08	0.2	0	7	x		x		x		x				x	2	8	0	3
Jamaica	x		1.6	0.5		4	x			x	x		x				x	1		0	
Mexico	x		0.16	0.20	0	5	x		x		x		x				x		100	3	
Nicaragua	x		0.2	0.2	0	0	x		x		x			x			x	6		1	
Panama	x		0.7	0.7	0.1	10	x		x		x		x				x	2	3	2	3
Paraguay		x						x		x	x		x				x	1		1	
Peru		x	0.15	0.18	2.1	3.0		x		x	x		x				x	13	17	0	6
Dom. Republic	x		0.17		0			x		x	x		x				x	2		0	
Trinidad-Tobago	x		1.45	0.4	1.0	10	x		x		x			x			x	3	6	-	-
Venezuela	x		0.49	0.55	0	5	x		x		x				x		x	15		46	

* Includes cities of all sizes

/1 1974 /2 Care is provided in unspecified beds

3. MENTAL HEALTH

REGIONAL GOALS: To improve the quality of primary prevention and care provided by psychiatric services and the accessibility of those services to the population, integrating these activities into the basic health services, with a view to attaining a 60% coverage of the population as a minimum.

Seven out of 10 countries view the field of mental illness as important, in that they have set goals of some sort in this area. At the beginning of the decade it was estimated that there were 625,000 beds in psychiatric hospitals in the Region, of which 475,000 were in North America. The ratio of beds per 1,000 inhabitants in 1971 showed great variation, ranging from 0.01 to 2.7, with an average close to 0.3 beds per 1,000 inhabitants.

Between 1971 and 1974 there were only three countries which had an appreciable number of psychiatric beds in general hospitals. It is noted that the majority of the countries propose to increase that proportion, and that eight of them intend to reach a proportion of at least 5%. Although outpatient services were not investigated, it is known that in 12 countries there are outpatient psychiatric services, at least in the capital and the provincial capitals, and it is to be hoped that by 1980 all of the countries would have this minimum coverage. The survey also did not obtain any data regarding child psychiatry. These data exist on a national scale in only two countries, while in another 13 countries there are outpatient child psychiatry offices which take care of the requirements of a fraction of the child population of the metropolitan areas.

As regards prevention activities, it is known that in nine countries there are some activities of this sort, although in only two of them is the volume of some importance.

4. ALCOHOLISM

REGIONAL GOALS: To reduce the trend toward an increase in alcoholism and drug dependence by making available preventive treatment and rehabilitation services covering the entire population.

Although in 1974 14 countries stated they had set goals in this area, only four of them had national programs for the control of alcoholism involving care, prevention, and rehabilitation services.

5. USE OF DRUGS CAUSING DEPENDENCY

REGIONAL GOALS: To reduce the trend toward an increase in alcoholism and drug dependence by making available preventive treatment and rehabilitation services covering the entire population.

In at least 18 countries there are official agencies concerned with the control of drug dependency. Only 11 countries set goals regarding this problem, although it is known that in only two countries of the Region is the magnitude of the extent of the problem known with some accuracy and medical services provided at the national level.

6. DENTAL HEALTH

The Ten-Year Plan calls for each country to establish its dental health priorities and goals in line with the national policies and depending on the availability of resources. It recommends that dental morbidity be decreased, especially of caries; that dental care coverage be increased, giving priority to care for children; that fluoridation be achieved in cities of more than 50,000 population; that dental education activities be intensified; and that personnel be trained, especially at the intermediate and auxiliary levels.

Although there is no complete dentral epidemiological map of the countries of the Region available, sufficient proof of the magnitude of the problem of dental diseases, especially caries, can be found in various studies which have been carried out in some countries. To this problem is added the limited availability of dental professionals. Only three countries of Latin America and the Caribbean had more than 3.5 dentists per 10,000 population in 1971, and more than 12 did not even have one dentist per 10,000 population, with an average for the Region of 1.9 dentists per 10,000 population; an additional problem is the great concentration of dental professionals in the cities and the consequent lack of care in the rural areas. The shortage of dental assistants is even greater, as there is a ratio of one assistant for every three dentists. Finally, only two countries of Latin America supply fluoridated water to more than 30% of their population; two others do so for between 15% and 30%; and the rest for less than 13%.

Faced with this situation, 19 of the 21 countries replying said they had set goals in the field of dental health to be attained during the decade. Most of them propose to carry out the integration of dental health in line with the levels established for care of individuals. For this purpose, 14 countries (two out of three) state that they have already defined programs. In four of the remaining one-third of the countries, the programs for integration are not yet defined, and in the other three integration is foreseen.

Only one country does not anticipate a broadening of the coverage of dental care giving priority to care for children. The 20 remaining countries state they anticipate such broadening, although they do not specify the manner in which it will be accomplished nor the magnitude of the coverage to be achieved.

There are indications that the number of cities of 50,000 or more population which will have fluoridated water by 1980 will represent a significant increase over 1971, although the information which the countries supplied in the survey is sparse. However, if compliance with the recommendation of the Ten-Year Plan is desired, the efforts of the countries in this regard must be much greater.

II. ENVIRONMENTAL HEALTH PROGRAMS

1. NATIONAL POLICY FOR THE PRESERVATION AND IMPROVEMENT OF THE ENVIRONMENT

	1.1 Definition of the policy				1.2 Formalization of the policy				1.3 Coverage of the policy						
	Definition			Degree of partic. of sector					Geographic			Institutional			Program areas
	Defined	In process of definition	Important	Slight	Declarative	By law	Not formalized	All of the country	Mixed	All institutions	Some institutions	Not defined	All areas	Some areas	Not defined
Barbados		x	x			x		x			x				x
Bolivia	x			x		x		x			x			x	
Brazil		x		x			x	x			x			x	
Canada	x		x				x		x			x	x		
Colombia	x		x			x		x			x			x	
Costa Rica	x		x		x			x			x		x		
Chile		x	x				x	x			x		x		
Ecuador	x		x		x			x			x		x		
El Salvador		x	x				x	x		x			x		
United States	x		x			x		x		x			x		
Guatemala	x		x		x			x				x		x	
Guyana		x	x		x			x			x			x	
Honduras		x	x			x		x		x				x	
Jamaica	x		.	.	x			x			x			x	
Mexico	x		x			x		x		x			x		
Nicaragua	x		x		x			x			x			x	
Panama	x		x			x		x		x				x	
Paraguay	x		x		x			x		x				x	
Peru	x		x			x		x			x		x		
Dom. Republic	x		x		x			x			x			x	
Trinidad-Tobago	x		x		x			x		x			x		
Venezuela	x		x		x			x		x			x		

1. NATIONAL POLICY FOR THE PRESERVATION AND IMPROVEMENT OF THE ENVIRONMENT

The need to have a broad national policy for preserving and improving the environment is evidenced by the fact that the majority of the countries of the Region had already defined such a policy, or were in the process of defining it, at the start of the decade. It is worthy of note that in almost all of the countries the share which the Health Sector has had, or is having, in the establishing of said policy is considered to be of importance.

The scope of the policies varies greatly as regards the coverage of geographic or program areas. Nevertheless, it can be seen that the aspects of the environment which are more closely related to health are in general a part of the proposed policies and existing legislation in the majority of the countries of the Region, and this is a development of great importance. It is to be hoped that by the end of the decade the national policies of the majority of the countries will show a clear influence of the recommendations of the Ten-Year Health Plan for the Americas, and that they will contain definitions and guidelines for environmental quality and planning.

2. NATIONAL PLAN FOR THE PRESERVATION AND DEVELOPMENT OF THE ENVIRONMENT

	Formulation of strategies		Programming of strategies		Intersectoral coordination			Areas of coverage of the strategies												
	Formulated	In process of formulation	Programmed	Partially or in process of programm.	Assignment of duties & responsibilities to sectors and institutions		Formal mechanism for coordination		Water supply	Sewerage and solid waste disposal	Collection and disposal of solid waste	Water pollution	Air pollution	Soil pollution	Noise abatement	Industrial hygiene	Animal health	Control of use of pesticides	Quality control of food	Quality control of drugs and medicaments	Other areas
					Yes	Partial	Yes	No													
Barbados		x		x		x		x		x	x	x	x	x							
Bolivia		x		x	x			x	x	x	x	x	x	x							
Brazil		x	.	.		x	.	.				x	x	x							x
Canada		x		x	x		x		x	x			x			x					x
Colombia	x			x	x		x		x	x	x	x	x	x							
Costa Rica	x			x		x		x	x	x	x	x	x	x		x	x		x	x	x
Chile		x		x		x		x	x	x	x		x			x	x				
Ecuador	x		x			x	x		x	x	x	x	x								
El Salvador		x							x			x	x	x		x			x		x
United States	x		x		x		x		x	x	x	x	x	x	x						x
Guatemala		x		x		x			x	x	x	x	x	x							
Guyana		x		x	x		x		x		x										x
Honduras	x			x		x	x		x	x	x	x	x	x		x	x	x	x		
Jamaica		x		x		x	x					x			x				x		x
Mexico	x		x		x		x					x	x								x
Nicaragua	x			x		x	x		x	x	x	x	x	x		x		x	x	x	
Panama	x			x		x		x	x	x	x	x	x	x	x	x					
Paraguay	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Peru	x		x		x		x		x		x		x								
Dom. Republic	x			x	.	.		x	x	x	x		x			x	x				
Trinidad-Tobago		x		x		x	x		x	x							x	x	x	x	x
Venezuela		x	x			x		x				x	x	x							

2. NATIONAL PLAN FOR THE PRESERVATION AND DEVELOPMENT OF THE ENVIRONMENT

It is interesting to note that in more than two-thirds of the countries of the Region strategies are being formulated, within the national plans, for the preservation and development of the environment. The specific environmental health components identified and recommended by the Ministers of Health of the Americas in 1972 have been considered by the majority of the countries. Potable water, sewerage and excreta disposal, solid waste collection and disposal, air pollution, and water pollution constitute the central nucleus of the environmental health strategies in the majority of the countries. Soil contamination, noise, occupational health, animal health, the use of pesticides, food hygiene, and control of drugs and medicines are components which receive selective attention, depending on the local conditions of each specific country. The attention given to each of these components can be interpreted as an indication of which are actually being considered as national needs and priorities. Therefore, it is to be hoped, for example, that--because of the potential dangers for health and the economic importance in countries in the process of industrialization--greater attention will be devoted to occupational health later on in the decade.

In the various countries important steps have been taken towards the achieving of greater intersectoral and institutional coordination, but the operational working mechanisms have yet to be developed.

3. WATER SUPPLY AND SEWERAGE

	3.1 Diagnosis of the subsystem						3.2 Definition of sectoral and institutional jurisdiction											
	Study of the legal and administrative framework			Preinvestment and financial studies			In the provision of water supply for urban localities						In the provision of water supply for rural areas					
										Responsibility of health sector						Responsibility of health sector		
	Has been studied	Under study	Study projected	Studies completed	Studies in progress	Studies projected	Defined	Not defined	In process of definition	Total	Partial	None	Defined	Not defined	In process of definition	Total	Partial	None
Barbados		x	x		x		x				x		x			.	.	.
Bolivia	x				x			x				x	x				x	
Brazil	x			x			x			.	.	.	x			x		
Canada	x				x		x				x		x				x	
Colombia	x				x		x				x		x			x		
Costa Rica	x				x		x				x		x				x	
Chile	x			.	.	.	x				x		x				x	
Ecuador	x			x			x						x			x		
El Salvador	x			x			x				x		x			x		
United States	x			x			x				x		x				x	
Guatemala	x				x				x	.	.	.			x		x	
Guyana	x				x		x				x		x				x	
Honduras	x				x		x			.	.	.		x			x	
Jamaica	x			x			x				x		x				x	
Mexico	x			x			x				x		x				x	
Nicaragua	x				x		x				x		x			x		
Panama	x				x		x			x			x			x		
Paraguay	x				x		x				x		x			x		
Peru	x			x			x				x		x			x		
Dom. Republic	x			x			x				x		x				x	
Trinidad-Tobago	x			x			x				x		x				x	
Venezuela	x				x		x			x			x				x	

3. WATER SUPPLY AND SEWERAGE (continued)

	3.2 Definition of sectoral and institutional jurisdiction (conclusion)												3.3 Consideration of the Ten-Year Plan goals as reference for establishment of national goals			Participation of institutions or sectors resp. for provision of services in establishment of goals		
	In sewerage services for urban localities						In excreta disposal services for rural areas											
				Responsibility of health sector						Responsibility of health sector								
	Defined	Not defined	In process of definition	Total	Partial	None	Defined	Not defined	In process of definition	Total	Partial	None	Has been considered	Partially considered	Not considered	Participated	Participated partially	Did not participate
Barbados			x	.	.	.	.	.	.	.	.	.		x		.	.	.
Bolivia	x						x				x			x				x
Brazil	x			.	.	.	x			x			x			x		
Canada	x						x				x				x			x
Colombia	x						x			x			x			x		
Costa Rica	x						x			x			x			x		
Chile	x						x				x		x					x
Ecuador	x						x			x			x			x		
El Salvador	x						x			x					x	x		
United States	x			.	.	.	x			.	.	.			x	x		
Guatemala			x	.	.	.	.	.	.		x		x				x	
Guyana	x						x				x				x	.	.	.
Honduras	x						x				x		x			x		
Jamaica	x						x				x				x	x		
Mexico	x						x			x			x			x		
Nicaragua	x						x			x				x		x		
Panama	x						x			x			x				x	
Paraguay	x						x			x			x				x	
Peru	x						x			x			x			x		
Dom. Republic	x						x			x			x			x		
Trinidad-Tobago	x						x				x		x			x		
Venezuela	x						x			x			x			x		

3. WATER SUPPLY AND SEWERAGE

3.1 Diagnosis of the subsystem

Sectoral and institutional responsibility for potable water, sewerage, and excreta disposal in the Region is well defined. The Health Sector has a partial responsibility in the supplying of potable water and the disposal of excreta in the rural areas of various countries, but it does not have responsibility for the disposal of urban drainage in the majority of them. Nevertheless, it should be noted that there are still certain limitations in the planning of potable water services in the Region. Despite the fact that various countries have carried out financing studies and that some of them have carried out sectoral studies, a greater national planning effort will be necessary if the proposed goals are to be attained.

3.2 Definition of sectoral and institutional jurisdiction

The type of participation which the Health Sector should have in the supplying of potable water and in the hygienic disposal of wastes is generally recognized. Nevertheless, the recognition of the role and the responsibility of the Sector in defining the goals for population coverage is not very clear; the same holds for the establishing and surveillance of compliance with the criteria and standards of quantity and quality of water for the urban and rural communities, as well as regarding the guarantees for the supplying of satisfactory services.

3.3 Consideration of the goals of the Ten-Year Plan

Most of the countries took into account the Ten-Year Plan in establishing their own national goals. Given the level of the goals set for supplying water to urban populations, it is to be expected that the recommendations of the Ten-Year Plan will be fulfilled. On the other hand, as regards rural sewage and potable water services, as well as the setting of regional goals for the disposal of excreta, planners may have been guilty of great optimism.

3. WATER SUPPLY AND SEWERAGE (continued)

3.4 Water Supply

	Estimated population in 1971 (in thousands)		Urban population					Rural population				
			Supplied with water through house connections (%)		Without water supply service (%)			Supplied with drinking water (%)		Without water service (%)		
	Urban	Rural	1971	1980	1971	1980	% of reduction	1971	1980	1971	1980	% of reduction
Barbados	1124 */1	144 */1	.	.	0	0	-			0	0	0
Bolivia	1650	3300	50	.	50	.	.	2	18	98	82	
Brazil	55394	41902	47	79	.	.	.	.	.	71	50	
Canada	16411 *	5157 *	.	.	.	.	.	.	.	.	.	.
Colombia	12732 */1	8631 */1	76	.	.	.	.	46 /2	.	.	.	.
Costa Rica	656 *	1142 *	95	95	.	.	.	56 /2	71	.	.	.
Chile	7489	2237	72	80	28	.	.	14	50	86	.	.
Ecuador	2140	3528	56	80	.	.	.	5	24	.	.	.
El Salvador	1376	2143	50 /2		.	.	.	23	45	77	55	
United States	160000 /2	50000 /2	100	100	.	.	.	92	.	.	.	.
Guatemala	1771 *	3473 *	40	. /4	.	.	.	13	33	.	.	.
Guyana	303 */6	455 * /6	85	95	15	5		70	90	30	10	
Honduras	813	1903	61	65	39	35		11	33	89	67	
Jamaica	690 */7	1171 * /7	94 /5	.	1 /5	.	.	48 /5	87 /6	52 /5	13 /6	
Mexico	30186 *	20460 *	64	72	36	28		19	30	81	70	
Nicaragua	896	981	64	80	0	0	-	3	35	97	65	
Panama	707 *	771 *	90	96	10	.	.	49	60	51	.	
Paraguay	855	1644	18	73	82	27		3	37	97	63	
Peru	7460	6555	20	30	.	.	.	8	13	.	.	.
Dom. Republic	1680	2440	56	70	.	.	.	11	30	.	.	.
Trinidad-Tobago	344	688	91	96	.	.	.	90	93	.	.	.
Venezuela	7834	2888	64	80	36	16		53	70	47	17	

* Source: United Nations Demographic Yearbook, 1972 and 1973
/1 1970 /2 1974 /3 1972 /4 70% for Guatemala City and 59% for cities in the interior /5 1970 /6 1973 /7 Provisional data, population as of 7/IV/70

3. WATER SUPPLY AND SEWERAGE (continued)

3.4 Sewerage and disposal of excreta (conclusion)

	Estimated population in 1971 (in thousands)		Urban population					Rural population				
			With sewerage service (%)		Without drinking water service (%)			With excreta disposal service (%)		Without excreta disposal service (%)		
	Urban	Rural	1971	1980	1971	1980	% of reduction	1971	1980	1971	1980	% of reduction
Barbados	1124 */1	144 */1	..	..	..	..	..	..	..	0	0	-
Bolivia	1650	3300	25	33	75	67		1	14	99	86	
Brazil	55394	41902	25	50	..	..	..	..	..	75	50	
Canada	16411 *	5157 *	..	..	..	..	..	..	..	..	..	..
Colombia	12732 */1	8631 */1	..	..	..	..	..	11 /3	..	89 /3	..	..
Costa Rica	656 *	1142 *	43 /3	70	..	..	..	40	100	..	..	..
Chile	7489	2237	43	80	57	..	..	14	50	86	..	..
Ecuador	2140	3528	49	70	..	..	..	5	18	..	..	..
El Salvador	1376	2143	38 /3	..	62	..	..	17 /3	..	83 /2	..	..
United States	160000	50000	98	..	..	..	..	82	..	..	..	..
Guatemala	1771 *	3473 *	40	.. /5	..	..	..	6	33	..	..	..
Guyana	303 */4	455 */4	13	23	87	77		0	..	100	..	..
Honduras	813	1903	51	54	49	46		9	42	91	68	
Jamaica	690 */5	1171 */5	28	..	72	..	..	81	..	19	..	..
Mexico	30186 *	20460 *	36	40	64	60		9	27	91	63	
Nicaragua	896	981	33	35	67	45		7	60	93	40	
Panama	707 *	771 *	68	75	32	..	..	69	75	31	..	..
Paraguay	855	1644	15	70	85	30		23	57	77	53	
Peru	7460	6555	12	20	..	..	..	0	1	..	..	..
Dom. Republic	1680	2440	16	40	..	..	..	15	30	..	..	..
Trinidad-Tobago	344	688	54	70	..	..	..	4	8	..	..	..
Venezuela	7834	2888	39	75	61	36		45	60	55	15	

* Source: United Nations Demographic Yearbook, 1972 and 1973
/1 1970 /2 1974 /3 70% of Guatemala City and 50% of the cities in the interior /4 1973 /5 Provisional data, population as of 7/IV/70

3. WATER SUPPLY AND SEWERAGE (conclusion)

	3.5 Programming of investments				3.6 Programs for improving and developing administrative institutions in operation						3.7 Goals and plans contained in overall or regional development plans					
											In overall plans			In regional plans		
	Programmed	In process of programming	Not programmed	Programming projected	At national level	At regional level	At institutional level	At local level	No programs existing	Programs projected	Yes	No	Partially	Yes	No	Partially
Barbados		x				x				x	x			.	.	.
Bolivia		x							x	x				x		
Brazil	x				x					x				x		
Canada	.	.	.	.		x							x	x		
Colombia	x				x					x				.	.	.
Costa Rica	x				x					x				.	.	.
Chile	x				x					x				.	.	.
Ecuador	x				x					x				.	.	.
El Salvador	x						x			x						
United States		x			x	x	x	x		.	.	.	.	x		
Guatemala		x			x					x				.	.	.
Guyana				x	x							x			x	
Honduras	x				x					x				x		
Jamaica		x					x					x			x	
Mexico	x				x					x				x		
Nicaragua		x					x			x				.	.	.
Panama		x				x				x				.	.	.
Paraguay		x					x	x		x				x		
Peru	x /1			x /2	x					x						
Dom. Republic	x						x					x		.	.	.
Trinidad-Tobago		x			x					x				.	.	.
Venezuela	x				x	x	x	x		x				.	.	.

/1 Water supply /2 Sewerage systems

3.4 Water supply

REGIONAL GOALS: To provide water services with house connections for 80% of the urban population or, as a minimum, to supply half the population presently lacking such services. To provide water for 50% of the rural population or, as a minimum, to supply 30% of the population presently lacking such services.

In 1971, two-thirds of the countries which replied to the evaluation questionnaire were below the regional goal to supply water to 80% of the urban populations. The proportion of the urban population supplied with water through house connections varied among the countries, ranging from 18% to 100%, with an average of 64%. By 1980 the goal set for the Ten-Year Plan will be achieved by only three more countries, to be added to the eight which had already achieved it by 1971; in the end, only one-half of the countries of the Region would have achieved the goal by 1980. This implies that unless additional efforts are made, the regional goal will not be attained.

As regards the rural population, in 1971 there were seven countries (one out of three) which had surpassed the regional goal. Of the rest of the countries, only two propose to reach it by 1980.

3.4 (continued) Sewerage and excreta disposal services

REGIONAL GOALS: To provide sewerage service to 70% of the urban population or, as a minimum, to reduce by 30% the proportion of the population lacking such service. To install sewerage systems and other sanitary means for the elimination of excreta for 50% of the rural population or, as a minimum, to reduce by 30% the number of inhabitants not possessing any adequate facilities.

In 1971 only two countries had surpassed the regional goal for urban populations. Of 15 countries setting goals for 1980, only seven (less than one-half) would surpass the regional goal. In the case of the rural population, only three countries had achieved the regional goal by 1971, and of 14 countries which set goals for 1980, only six propose to achieve levels equal or superior to the regional goal.

3.5 Investment programming

Only one-half of the countries indicated they had programmed their investments, which in most cases refer to those made in potable water and sewerage.

3.6 Administrative development

There is an auspicious interest in the administrative improvement and development of the institutions which supply water and sewerage services. Such development and improvement is being programmed at national, regional, and institutional levels.

3.6 Incorporating of goals and plans in overall development plans

In almost all of the countries, whenever overall or regional development plans exist, the goals and plans for environmental health have been incorporated therein, as regards both investment and the providing of services.

4. COLLECTION AND DISPOSAL OF SOLID WASTES

	4.1 Diagnosis of the subsystem						4.2 Goals adopted							4.3 Incorporation of goals in development plans					
	Study of legal and administrative framework			Preinvestment and financing studies			Cities with 20,000 inhabitants and over							The goals and plans have been incorporated in:					
									With adequate systems for collection and disposal of solid waste					Overall development plan			In regional development plans		
									N°		%								
	Has been studied	Under study	Projected	Completed	In progress	Projected	In 1971	In 1980	In 1971	In 1980	In 1971	In 1980		Yes	Partially	No	Yes	Partially	No
Barbados			x		x							100		x					
Bolivia	x				x		9	11	0	5	0	50			x			x	
Brazil																			
Canada	x				x							100			x			x	
Colombia		x			x				0	40	0			x			x		
Costa Rica		x				x	6	6	1	6	17	100			x				x
Chile	x			..	..	..	45	52	39	52	86	100				x			x
Ecuador		x			x		20	22	1	15	5	70				x			x
El Salvador																			
United States		x					>1000	>1200	..	..	..	..		..	..	..	..	..	..
Guatemala			x			x	6	11	1	8	17	73		x					
Guyana		x				x	1		1		100					x			x
Honduras		x					6	9	0	6	0	70			x			x	
Jamaica			x			x	4	5	2		50					x/1			x
Mexico	x			x			182	208	9	125	5	60			x			x	
Nicaragua		x				x	7	12	1	12	17	100		x					
Panama		x			x		5	7	2	4	40	57			x			x	
Paraguay							4	9	0	6	0	66						x	
Peru	x				x		52	76	1	15	2	20			x			x	
Dom. Republic	x					x	15	20	9	14	60	70		x					
Trinidad-Tobago	x						15	18	-	-	-	-				x			x
Venezuela	x			x			63	96	43	46	68	48		x					

/1 There is no overall development plan.

4. COLLECTION AND DISPOSAL OF SOLID WASTES

4.1 Diagnosis of the subsystem

It is obviously necessary to complete the study of the legal and administrative framework, as well as to carry out preinvestment and financing studies in most countries. This is essential if it is desired to ensure that the agencies in charge will be able to provide those services and to obtain their financing while the Ten-Year Plan is in force.

4.2 Goals adopted

Although the questionnaire used in the evaluation requests information concerning the number of cities with adequate systems for the collection and disposal of solid wastes, it is obvious that, since there is no uniformity in the criteria to define a system as adequate, such evaluation is not possible. It is clearly necessary to have such definition of criteria before 1980.

4.3 Incorporation of goals in development plans

The recommendations of the Ten-Year Plan have been taken into consideration by only a few countries. More information and a detailed study of the problems are required before setting definite goals. In view of the existence of potential health risks and of the environmental degradation related to solid wastes, there is a justified reason for the health sector to participate in such studies and to promote the sanitary collection, recycling, treatment and disposal of solid wastes, including a reduction of the wastes produced, provided that the latter is feasible.

5. AIR, WATER AND SOIL POLLUTION

6. NOISE CONTROL

	5.1 Water pollution control programs (in operat. or proj.)			5.2 Air pollution control programs								5.3 Soil pollution control programs			Technical guidelines and regulations exist for control			
	In hydrographic basins	In coastal waters	In other bodies of water	Do not exist	Exist, in operation	Projected	Do not exist	Number of cities with sampling stations		Number of sampling stations					Yes, adequate	Yes, incomplete	Under development	Do not exist
										Total		In the Pan American Network						
								1971	1980	1971	1980	1971	1980					
Barbados		x	x			x		1		-	5	-	5	x				x
Bolivia				x	x			1	1	2	2	2					x	x
Brazil		x	x		x			2		2					x			x
Canada	x	x	x		x											x		
Colombia	x	x			x			1	16/1	1	44/1	1	44/1	x				
Costa Rica				x		x		1	1	1	2	1	2		x			x
Chile	x				x			1	3	2	10	2	10		x		x	
Ecuador	x					x		1/2	11	1/2	18	1/2	..					x
El Salvador	x				x			1	3	1	7	1	6		x			x
United States	x	x	x		x			254/2	233/2	8218	6556	0	0				x	
Guatemala	x				x			0	2	0	6	0	6		x			x
Guyana				x			x											x
Honduras				x			x	0	2	0	4	0	4	x				x
Jamaica	x	x				x		1		1		1						x
Mexico	x	x			x			1	4/1	18	40/1	14/1	14	x			x	x
Nicaragua				x			x											x
Panama	x	x				x		-	1	-	6	-	-		x			
Paraguay	x	x	x			x									x			
Peru	x	x	x		x			1	6	3	8	1	1		x			x
Dom. Republic	x	x					x	0	4	0	8	0	..	x			x	
Trinidad-Tobago				x			x	0	1	0	1	0	1					x
Venezuela	x	x	x		x			1/3		5/3		5/3		x			x	

/1 1977 /2 1974 /3 Areas, not only cities

5. AIR, WATER AND SOIL POLLUTION

The legal, administrative and institutional framework for the development of environmental pollution control activities requires a clear definition in most countries in the Region.

5.1 Water pollution

Isolated efforts are being made in some specific hydrographic basins in various countries. Such experiments must contribute to the definition of policies; the participation of the Health Sector, however, has been only marginal in these few cases. Without a more direct action, it is likely that the health aspects that must be considered in such projects will not be dealt with satisfactorily. It is necessary to strengthen the health agencies in order to enable them to participate more actively, together with other sectors, in the planning, design and implementation of the control measures, as a prerequisite for the achievement of broad solutions.

5.2 Air pollution

The attention paid to the problem of air pollution has increased considerably in recent years and probably must continue to increase. The control programs, however, are of limited scope, consisting in most countries of monitoring activities only. The analysis of the information thus collected should make possible a better definition of the problem and of the responsibilities of each jurisdiction. The Health Sector should obviously be responsible for defining and applying the air quality standards compatible with health requirements.

5.3 Soil pollution

Soil pollution control has received very little attention from countries possibly as a result of the presence of more urgent needs. In order to start control programs, a prior definition of the problem is required, which is not available in many countries. The scope of soil pollution which is not due to the disposal of solid wastes may require further clarification. Naturally, the Health Sector should play an important role, in view of the health implications of soil pollution.

6. NOISE CONTROL

Most countries have deemed appropriate to allocate to noise control programs one of the lowest priorities among those allocated to environmental problems. A better definition of the nature of the problem would make it possible to identify some areas which would require greater attention.

7. REGIONAL DEVELOPMENT PROJECTS

	7.1 The national development plan projects regionalization of the country			7.2 Regional development plans				7.3 Participation of the health sector in regional development plans									
					Number of plans			Number of plans in operation					Number of plans programmed				
	Yes	No	No. of regions	Plans exist	Do not exist	In operation	Being programmed	Projected	None	Scarce or minimal	Partial	Active	Integrated	None	Scarce or minimal	Partial	Active	Integrated
Barbados	X			X														X
Bolivia	X			X		1											X	X
Brazil	X			X		5						X					X	
Canada				X														
Colombia																		
Costa Rica		X																
Chile	X															X		
Ecuador	X			X														
El Salvador	X			X		1						X	X				X	X
United States	X			X		46	150											X/1
Guatemala																		
Guyana	X																	
Honduras	X			X														
Jamaica		X/2			X													
Mexico	X																	
Nicaragua	X			X			5										X	
Panama	X			X		4	2			X						X		
Paraguay	X			X		2						X						
Peru	X			X		1	6	3		X							X	
Dom. Republic	X			X			3					X					X	
Trinidad-Tobago	X			X		3	6			X					X			
Venezuela	X			X			8										X	

/1 Safe Drinking Water Act, in U.S. /2 No national development plan

7. HEALTH ASPECTS OF REGIONAL DEVELOPMENT

REGIONAL GOAL: To ensure the active and systematic participation of the health sector in the formulation and implementation of regional, national and multinational development plans.

For some years, countries have been attempting to deal with national development on the basis of regional development plans, not only as a mechanism to respond to the acute crises caused by the excessive and growing demographic, economic, political and cultural concentration in major cities to the detriment of other parts of the country, but also--and, in some cases, this is more important--as a more effective method to achieve a rapid development of the integration of national society, a better employment of human resources and a more efficient utilization of natural resources.

The development programs for river basins, viewed as development projects for multiple purposes, appeared in Latin America during the previous decade; generally, it was ensured that they would take into consideration various health aspects. With this experience, and in view of the importance of integration and coordination among sectors in regional development planning, the Ministers of Health recommended the adoption of a policy through which the health authorities would participate, on an integrated basis, in the definition, design, implementation and evaluation of each regional development project.

Seventeen out of the 19 countries have national development plans that provide for regionalization, which, naturally, is being pursued in the most diverse manner, depending on the features typical of each country. In turn, in 15 of those countries there are already regional development plans, in varying number, which are already in operation in eight countries, and are being programmed or projected in seven more.

In one-half of the countries which reported the existence of plans in operation, the participation of the Health Sector is active and/or integrated, while in three other countries such participation is minimal or partial. On the other hand, with respect to the programming of regional development plans, it appears that only one country considers the participation to be scarce or minimal, two more define it as partial, and in nine it has been or is active and/or integrated.

8. OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE

	8.1 Defined policy for protection of the working population exposed to risks			8.2 Sector or institutions that have responsibility for occupational health and industrial hygiene							8.3 Occupational health programs			8.4 Evaluation of occupational risks and exposed population				8.5 Population exposed to the risks for which they are to be protected (%)	
								Operation of coordination mechanisms											
	Yes	No	Under study	Ministry of Health	Ministry of Labor	Social Security	Other	Adequate	Deficient	Non-existent	Exist	Non-existent	Projected	Done	Partially	Not done	Projected	1971	1980
Barbados				x	x					x		x			x				
Bolivia		x		x	x	x	x		x		x				x			10/1	25
Brazil	x				x			x			x			x				/2	/2
Canada	x			x	x		x	x			x				x				
Colombia	x			x	x	x					x			x			x	7	50
Costa Rica	x			x	x	x			x			x	x		x				
Chile	x			x			x	x			x				x			10	30
Ecuador	x			x		x			x		x			x				20/1	40
El Salvador	x				x	x					x			x					
United States	x			x	x		x	x			x				x/4			70	91
Guatemala		x		x			x		x				x			x			
Guyana																			
Honduras	x			x	x					x	x				x				
Jamaica		x		x	x					x			x				x		
Mexico	x							x			x				x				
Nicaragua		x		x	x			x				x	x			x			50
Panama	x			x		x			x		x				x			59	65
Paraguay		x		x	x	x				x			x		x			0	50
Peru	x			x			x	x			x			x					
Dom. Republic	x			x	x	x			x		x				x			0	50
Trinidad-Tobago		x		x			x		x			x				x			
Venezuela	x			x		x			x		x				x			10/1	

/1 1974 /2 7.3 million /3 19 million /4 Continuous operation in process

8. OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE

8.1 Policy for the protection of the population exposed to risks

Three out of every four countries report the existence of a defined policy for the protection of the working population exposed to risks, while in the remaining countries it is stated that such policy is presently under study. On the other hand, if one considers that there are very few countries in which occupational risks have been evaluated in their entirety, or the population exposed to them has been defined, in addition to the insufficient coordination among the institutions that have responsibility for occupational health, it can easily be concluded that the policies defined by the various countries must have a widely varying coverage, and be very general or highly specific with respect to some occupations or risks.

8.2 Responsible sectors or institutions

In almost all countries, there is an overlapping of activities and responsibilities concerning occupational health and industrial hygiene. The Ministries of Health and of Labor and Social Security--which may be subordinated to the latter Ministry--are the institutions which share most responsibilities. Only one-third of the countries state that the coordination mechanisms among such institutions are operating adequately; in the remainder, such mechanisms are either deficient or nonexistent. The achievement of better coordination could render more effective the evaluation of occupational risks and the improvement and control of the activities concerning health risks which are presently being implemented in an almost isolated manner.

8.3 Occupational health programs

Two out of every three countries mention the existence of occupational health programs. It is known, however, that most programs are limited to the areas of responsibility of the sector which implements them. Consequently, there are few integrated programs that include evaluation, correction and control.

8.4 Evaluation of occupational risks

Generally, evaluation has been of a partial nature. Where it has been performed, there has been little or no follow-up.

9. ANIMAL HEALTH AND VETERINARY PUBLIC HEALTH

9.1 Zoonoses control

	9.1.1 Canine rabies						9.1.2 Bovine brucellosis		9.1.3 Bovine tuberculosis	
	Incidence (per 100,000 dogs)		Percentage of dogs vaccinated (in larger cities)		Percentage of stray dogs (in larger cities)		Prevalence (%)		Prevalence (%)	
	1971	1980	1971	1980	1971	1980	1971	1980	1971	1980
Barbados	-		..		..		-		14.6/1	
Bolivia	171.6		10	80	..		3	1	2	
Brazil	28.8		48		..		5.87		3.07	
Canada	/2		/3		..		0.02	0	0.02	0
Colombia	9	3	..		7	2	..		..	
Costa Rica	5.6	0	..	80	30	(Control)	2.3	(Reduction)	0.8	0
Chile	2.1	0		80	15	3	15	8	12	9
Ecuador	700	0	28	80	..		2.7	2	..	
El Salvador										
United States	0	0	50	70	15	5	1	0	0.1	0
Guatemala										
Guyana	0	0	0	0	60	0	2	0	6	<1
Honduras		0 /4	4 /5		20		3.6	1.5	1.2	/6
Jamaica	0	0	0	0	..	0	1	0.02	1	0.02
Mexico										
Nicaragua			-				..		..	
Panama	62 /7	0	61	80	-		1.25	0	0.2	0
Paraguay										
Peru	89	6	54	80	20	10	4.08	1	2.84	1
Dom. Republic	25.9	11	0.75	80			12	1	3	1
Trinidad-Tobago	0	0	0	0	..		0	0	0.1 /8	0
Venezuela	36.6	3.6	40	90	5	1	6	1	0.46	0.20

/1 Of 320 bovines examined /2 109 cases in a canine population estimated at 10 million
/3 A high proportion /4 Control and/or eradication /5 All over the country /6 Program to be established in 1974; three areas changed from low prevalence in 1977 and one in 1980
/7 Province of Chiriquí; less in the rest /8 Eradication

9.1.1 Canine rabies

REGIONAL GOALS: Eradication from the most important cities in the Region. Vaccination of 80% of the dog population of the most important cities. Elimination of stray dogs.

Rabies continues to be a common disease in the Americas. While in North America the problem appears to concern wild animals, or rural areas, with rare and accidental human cases, in Latin America the problem is of an urban nature, dogs being the principal source of human infection. In the 1969-1972 four-year period, an average of 283 human cases a year were notified--a decline of only 7% with reference to the annual average notified during the preceding four-year period--75% of which occurred in three countries. In the year 1971, 23,052 cases of animal rabies were notified in Latin America. Almost 90% of such cases concerned dogs or cats.

Fifteen of the 22 countries participating in the evaluation of the Ten-Year Plan report on the canine rabies situation, supplying incidence figures which range between 0 and 700 cases per 100,000 dogs in 1971, with a mean incidence of nine per 100,000. The majority (13) of the countries have set themselves goals to reduce such rates by 1980, and nine of them have explicitly adopted the regional goal of eradication in important cities. The dog vaccination figures for such cities show that no country had attained in 1971 a level of 80% of dogs vaccinated, which is the regional goal for 1980. Almost two-thirds of the reporting countries, however, have selected this percentage as their national goal. With respect to the stray dog population of important cities, information was obtained from only eight countries which estimate the percentage to range between 5% and 60%. Those countries aim at reducing such percentages to levels ranging between 0 and 10%.

9.1.2 Bovine brucellosis

REGIONAL GOAL: Eradication in countries in which prevalence is 1% or less and reduction to a prevalence of less than 2% in the other countries affected by this problem.

During the 1969-1972 four-year period, 16 countries of the Americas notified an annual average of 3,204 human cases of brucellosis, 91% of which were concentrated in three countries. In the immediately preceding four-year period, the annual average of cases in the Region was 4,596, which shows that in that period a substantial reduction was achieved, which ranged between 15% and 45% in the three highest-incidence countries.

With respect to bovine brucellosis, according to the figures supplied by 15 countries which reported on its prevalence in 1971, the latter ranges between 0% and 15%, with a mean prevalence of 2.7%. Thirteen of those countries have set themselves reduction goals; 11 of them coincide with the goals of the Ten-Year Plan.

9.1.3 Bovine tuberculosis

REGIONAL GOAL: Eradication in countries in which prevalence is 1% or less and reduction to a prevalence of less than 1% in the other countries affected by this problem.

Fifteen of the 22 countries which participated in the evaluation of the Ten-Year Plan reported the presence of this problem, with prevalence figures ranging between 0.1% and 14.6% of bovines, with a mean prevalence of 1.2%. Among those countries, 12 set themselves reduction goals and 10 of them adopted the recommendation of the Ten-Year Plan.

9. ANIMAL HEALTH AND VETERINARY PUBLIC HEALTH (continued)

	9.1 Zoonoses control (continued)												
	9.1.4 Hydatidosis				9.1.5 Leptospirosis				9.1.6 Equine encephalitis				
	Prevalence (%)		Supervised slaughter-houses (%)		Existence of the problem in animals 1971			Goal for 1980	Incidence per 1,000 equines		Equines vaccinated (%)		
	1971	1980	1971	1980	Yes	No	Not known		1971	1980	1971	1980	
Barbados	-				x			Presence	-				
Bolivia	..		33	70	..	..	..		..				
Brazil	16.44		40	100	x						..		
Canada			80	100	x								
Colombia	..		..		..	..	..		..		..	80	
Costa Rica	0	0	19			x		No	2.6/1		82	80	
Chile	..	52	40	51		x	x		-		-		
Ecuador	..		30	100			x		4.1/2	1.2	3	80	
El Salvador													
United States	1	0	100	100	x			Presence	0.03	0.0	1.3	0	
Guatemala													
Guyana	0	0	30	100	x			No	0	0	0	0	
Honduras	/3				/4								
Jamaica	0	0	100	100	x			Reduction	0	0	3	0	
Mexico													
Nicaragua	..		..		..	..	..						
Panama	/5		84/6		x			Research	17.1/7	0	37.6/7	80	
Paraguay													
Peru	15.2		..	100	x			Study	0	0	60	80	
Dom. Republic	..						x		..		..		
Trinidad-Tobago	0	0	0	100			x	Research	0	0	0		
Venezuela	..	0	25	100			x				17.6/3		

/1 Mortality /2 1974 /3 One human case /4 14 human cases, 30 outbreaks /5 No ovine stock
/6 Slaughterhouse inspected in 1974 /7 1973

9.1.4 Hydatidosis

REGIONAL GOALS: To reduce prevalence. To supervise 100% of the slaughterhouses and public and private places in which animals are processed for consumption.

Hydatidosis continues to be a problem which prevails mainly in South America. From 1969 to 1972, 1,579 human cases were notified in the Americas, a figure very similar to that for the preceding four-year period, and 93% of them occurred in the three countries of the Southern Cone.

Only seven of the 22 countries participating in the evaluation supplied any information on prevalence among animals for 1971: four of them consider it to be nonexistent, one estimates it at 1% and the other two at above 15%. Of the seven countries which set themselves goals for 1980, six intend to reduce prevalence to zero.

Twelve countries reported on the percentage of slaughterhouses supervised in 1971, with figures ranging from 0 to 100%, and a mean level of approximately 35%. Eleven countries have decided to increase the supervision of slaughterhouses by 1980 and nine of them aim at at achieving the regional goal of 100%.

9.1.5 Leptospirosis

REGIONAL GOAL: Evaluation of the problem.

The human cases of leptospirosis notified during the 1969-1972 period amounted to an average of 118 a year, of which one-half occurred in North America, 40% in the Caribbean, 7% in Panama, and a little over 2% in South America. With respect to the problem among animals, in 8 out of 14 countries its existence is known, in five it is unknown whether it exists or not, and in one it does not exist. Only three countries have set themselves the regional goal of researching the problem.

9.1.6 Equine encephalitis

REGIONAL GOAL: Reduction of its incidence and vaccination of 80% of the equines.

Only eight countries supplied estimates of its incidence at the beginning of the Ten-Year Plan period. In four of them it was considered nonexistent; in one its incidence was very close to zero; and in the other three it exceeded 2.5 cases per 1,000 equines. Six countries set themselves eradication goals by 1980, and one a reduction from 4.1 to 1.2 per 1,000. Five countries adopted the goal of vaccinating 80% of the equines, as recommended in the Ten-Year Plan; vaccination is not envisaged in three other countries.

9. ANIMAL HEALTH AND VETERINARY PUBLIC HEALTH (continued)

9.1 Zoonoses control (conclusion)

9.1.7 Foot-and-mouth disease

	Incidence in bovines (per 1,000)		Program phase						Percentage of areas free of foot-and-mouth disease	
			In 1971			In 1980				
	1971	1980	Attack	Consolidation	Evaluation	Attack	Consolidation	Evaluation	1971	1980
Barbados										
Bolivia										
Brazil	199	-	x						0	
Canada	0	0							100	100
Colombia	6.1	-	x						..	..
Costa Rica	0	0			x			x	100	100
Chile	18.4	0	x					x	17	100
Ecuador	180	0	..	..	..			x	0	100
El Salvador									100	100
United States	0	0			x			x	100	100
Guatemala									100	100
Guyana	0	0	x					x	80	100
Honduras									100	100
Jamaica	0	0							100	100
Mexico									100	100
Nicaragua	0	0			x			x	100	100
Panama	0	0			x			x	100	100
Paraguay			x						..	..
Peru		25					x		0	50
Dom. Republic									100	100
Trinidad-Tobago	0	0			x			x	100	100
Venezuela	700	1	x	/1				x	8	-

/1 Quarantine

9.1.7 Foot-and-mouth disease

REGIONAL GOAL: **Eradication. To reach the evaluation stage of the eradication program and to expand the areas free of foot-and-mouth disease to 100%.**

Only five countries reported an incidence of foot-and-mouth disease in bovines, with figures ranging between 0.1 and 700 cases per 1,000 bovines. The countries which were free of foot-and-mouth disease in 1971 intend to remain in such condition by 1980, and they amount to a total of 12 countries out of 19 which submitted reports. Of the seven remaining countries, five intend to reduce the incidence to zero by 1980, and the other two to 25 and 1 per 1,000, respectively. Six countries were in the attack phase of the program and five in the evaluation phase. By 1980, with the exception of one country which would begin the consolidation phase, all the others would proceed to the evaluation phase. With the exception of the country mentioned above, which expects to have freed 50% of its area of foot-and-mouth disease by 1980, all the others would have attained the full 100%.

9. ANIMAL HEALTH AND VETERINARY PUBLIC HEALTH (conclusion)

	9.2 Veterinary public health units in the health ministries					9.3 Zoonoses control programs in the ministry of health				9.4 Coordination between agriculture and health ministries			9.5 Epidemiologic surveillance programs for the zoonoses		
			Programs												
	Exist	Nonexistent	At national level	At regional level	At local level	Exist	Nonexistent	Projected	Funds allocated by the ministry for these programs (in 1,000's of dollars)	Investment by other sectors for zoonoses control (in 1,000's of dollars)	Adequate	Should be improved	Nonexistent	Adequate	Should be improved	Improvement expected	Inadequate
Barbados			x				x					x			x		
Bolivia		x						x				x			x		
Brazil		x					x					x					x
Canada		x		x			x					x			x		
Colombia	x		x			x						x			x		
Costa Rica	x		x			x						x			x		
Chile	x		x	x	x			x	70800			x			x		
Ecuador	x		x			x						x			x	x	
El Salvador		x					x					x			x		
United States	x		x	x	x	x			793000	..	x			x			
Guatemala	x		x			x						x			x		
Guyana	x		x					x			x				x		
Honduras	x		x	x		x			18			x			x		
Jamaica	x		x			x			12.6	150		x			x	x	
Mexico																	
Nicaragua	x					x/1						x			x		
Panama	x					x						x					x
Paraguay						x						x			x		
Peru	x		x			x						x			x		
Dom. Republic	x			x		x				4600			x				x
Trinidad-Tobago	x		x			x			12	52/2		x					x
Venezuela	x		x	x	x	x			186	-		x			x		

/1 Rabies only /2 1974

The Ten-Year Health Plan recommends the promotion, strengthening and consolidation of animal health and veterinary public health services, so as to achieve an adequate coordination among the programs of the Ministries of Health and Agriculture in the various countries. For this purpose, it is considered necessary to establish or strengthen the appropriate units within the infrastructure of the ministries. This will make possible to establish and consolidate the zoonoses and foot-and-mouth disease control programs, to strengthen operational epidemiological research and the notification of diseases, and to develop integrated programs for the control and hygiene of foods of animal origin.

9.2 Veterinary public health units in the health ministries

Nineteen countries reported on the existence of units of this type in the health ministries. Only four reports stated that they do not exist. The veterinary public health programs are of national scope in 13 countries. Regional programs are being implemented in six countries (in two, they are exclusively regional), and local programs are carried out in three countries.

In spite of this apparently desirable situation, it is known that, with the exception of a few countries, animal health and veterinary public health activities are limited and of a rather regional nature. The national plans for zoonoses control suffer from a lack of adequate infrastructure and auxiliary services. There is a scarcity of qualified professional personnel in several of the disciplines involved.

9.3 Zoonoses control programs in the Ministry of Health

According to information supplied by 21 countries, in 14 of them there are zoonoses control programs in the Ministry of Health. In four, there are no such programs, and in three they are being planned. In many cases, such programs are restricted to particular zoonoses, especially the control of rabies.

9.4 Coordination between health and agriculture ministries

In only one of the 19 countries which submitted reports, it is stated that such coordination is nonexistent, and in two more it is considered adequate. In the other 16 countries it is stated that coordination between the two ministries should be improved.

9.5 Epidemiological surveillance of zoonoses

Twenty-one countries supplied information concerning zoonoses surveillance programs. Only one considers its program to be adequate; four consider it inadequate, and the remaining 16 believe that it should be improved; improvements are expected in two of them.

10. CONTROL OF THE USE OF PESTICIDES

	Goals have been proposed in this field		Annual volume of pesticides produced and imported (tons)	10.1 National legislation on control of use of pesticides			10.2 Laboratories for analysis of pesticides				10.3 Programs for the control of the use of pesticides		
	Yes	No		Adequate	Not adequate	Under study	Adequate	Should be improved	Non-existent	Projected	In operation	Non-existent	Projected
Barbados	X			X				X			X		
Bolivia		X			X				X			X	
Brazil	X		180000 /1	X						X			X
Canada		X	/2	X			X				X		
Colombia													
Costa Rica	X		/3		X			X					X
Chile		X	7000		X	X			X	X		X	X
Ecuador		X	...			X				X			X
El Salvador		X	15.5	X			X				X		
United States	X		696000	X				X			X		
Guatemala					X			X				X	
Guyana	X					X			X				X
Honduras		X							X			X	
Jamaica	X			X				X			X		
Mexico													
Nicaragua		X				X		X					X
Panama	X				X			X			X		
Paraguay		X				X			X				X
Peru		X				X			X			X	
Dom. Republic		X		X			X					X	
Trinidad-Tobago	X		1.0		X			X			X		
Venezuela			14	X				X			X		

/1 1974 /2 Establishes a monetary value (96,000,000 in dollars)
/3 937.5 T. of technical products and 6.628 T. of compounds in 1972

10. CONTROL OF THE USE OF PESTICIDES

On the basis of available information, enormous amounts of pesticides of all types are used in all countries in the Hemisphere, and their indiscriminate use has become a major preoccupation for those who are responsible for the health of their countries. A number of deaths and intoxication cases caused by pesticides, which are classed as occupational, accidental, and suicidal, have been reported. The Ten-Year Plan contains a recommendation to:

> Endeavor, during the decade, in each of the Latin American and Caribbean countries to reduce intoxications and human deaths caused by the indiscriminate use of pesticides.

Furthermore, the Plan suggests a series of actions to that effect, among which, of particular importance, are those aiming at obtaining adequate legislation, providing laboratories for analyses, and organizing and implementing specific control programs.

It is evident that countries have recently begun to pay attention to this problem, because eight out of 19 countries have set themselves goals for action. On the other hand, it is noted that very few are the countries which have information available concerning the volume of pesticides that are used each year, a datum which, raw as it may be, provides an initial indication of the extent of their use.

According to the replies from 19 countries, it is the opinion of eight of them that their national legislation for the control of the use of pesticides is adequate. The other 12 countries, on the other hand, consider it to be insufficient, and in six of them it is under study.

The laboratories required for the analysis of pesticides are considered adequate in only three countries, while in six of them they simply do not exist. In one-half of the countries, there are laboratories which should be improved. Three countries mention the existence of projects intended to organize or improve them.

Programs for the control of the use of pesticides exist in two out of every five countries. In more than one-half of the countries in which programs do not exist, they are being projected.

In view of the present situation, it will be necessary for the health and agriculture sectors in the various countries to obtain better information concerning the seriousness of the problem and the extent of human losses and health damage and to establish greater coordination between them in order to implement control procedures. No great progress has been made with respect to the enactment of effective legislation, mainly as a result of the deficiencies in the laboratory services for the surveillance that can make possible its enforcement, although several laboratories are performing analyses of some specimens, mainly in cases of human intoxication and contamination of some foods. An increased training of laboratory analysts is required. It is also necessary to prepare and distribute information concerning agriculture and health, epidemiology, treatment of cases and laboratory procedures for diagnosis and analysis.

11. QUALITY CONTROL OF FOODS

	Goals have been proposed in this field		11.1 National legislation on food quality			11.2 Food contamination laboratories			Control programs			
	Yes	No	Adequate	Not adequate	Projected	Adequate	Not adequate	Projected	Food products that are registered and controlled (annual average for past three years)	In operation	Non-existent	Projected
Barbados	x			x			x				x	
Bolivia		x		x			x			x		
Brazil	x		x				x		2150	x		
Canada	x		x			x			..	x		
Colombia	x			x			x			x		
Costa Rica	x		x				x		300 /2	x		
Chile	x			x			x				x	
Ecuador	x			x		x			962236	x		
El Salvador	x			x			x		408	x		
United States	x		x			x				x		
Guatemala	x			x			x		1032	x		
Guyana	x				x		x					x
Honduras	x		x			x			242	x		
Jamaica			x				x		193	x		
Mexico	x		x				x		2923	x		
Nicaragua	x			x			x			x /1		
Panama	x			x		x			1000	x		
Paraguay		x		x			x			x		
Peru		x	x				x				x	
Dom. Republic	x			x			x		446	x		
Trinidad-Tobago			x				x		0	x		
Venezuela	x			x			x		524	x		

/1 Ministry of Economy /2 300 registered; 3,000 samples examined

11. QUALITY CONTROL OF FOODS

During the past decade, food production levels in the Latin American countries were low and remained virtually stationary, while imports steadily increased. This situation is aggravated by the decomposition and contamination that cause the destruction and waste of a great amount of food destined for direct consumption, as a result of deficient or inadequate conditions in transportation, processing, storage or commercial distribution.

Legislation and control measures relating to food quality and hygiene have failed to keep pace with the rapid technological development of the food industry, thereby increasing the hazards of contamination and the possible harmful effects of food additives and toxic residues, resulting in damage of varying seriousness suffered by millions of consumers.

This situation was properly analyzed and the action to deal with it was summed up in a regional goal of the Ten-Year Plan and in recommendations for action intended to achieve it:

REGIONAL GOAL: Reduce human illness and economic losses caused by the microbial, chemical, and physical contamination of food and food by-products, as well as preserve their quality.

The interest that countries have in this field is evidenced by the fact that the majority of them have set themselves national goals to be achieved during the decade. Presumably, in order to achieve them, they will have to overcome widely varying conditions, among which it is important to mention the availability of adequate legislation, of analysis laboratory facilities, and the organization of specific food control programs.

In two out of every five countries, the national legislation concerning food quality is considered adequate and, of the other countries (13), only one is preparing a bill. Even if legislation were adequate in all countries, the possibility of enforcing it would be limited, because laboratory facilities are insufficient to provide the necessary support by performing the analyses that should be performed. Only five countries (slightly over 1 out of 5) consider their available food control laboratories to be adequate.

In spite of this situation, 18 countries (over 4 out 5) have control programs in operation. It is reasonable to assume that many of those programs are limited to registering new products and granting licenses for their distribution, without a prior, adequate analysis of them.

There are indications that this situation is tending to improve. Food protection programs are receiving greater attention from the ministries of health and agriculture, a greater number of food inspectors are being trained, and food hygiene units are being established in the ministries under the direction of veterinarians.

12. QUALITY CONTROL OF DRUGS

	Goals have been proposed in this field		12.1 Central agency for drug control			12.2 Legislation			12.3 Laboratories for analysis and evaluation of drugs			12.4 Drug evaluation and registration system		
	Yes	No	Exists	Non-existent	Projected	Adequate	Not adequate	Projected	Adequate	Not adequate	Projected	Adequate	Not adequate	Projected
Barbados	x			x		x				x		x		
Bolivia		x			x		x			x			x	
Brazil	x		x				x			x			x	
Canada	x		x			x			x			x		
Colombia														
Costa Rica	x		x			x				x			x	
Chile	x		x			x			x			x		
Ecuador	x		x				x			x			x	
El Salvador														
United States	x		x			x			x			x		
Guatemala			x				x			x			x	
Guyana	x				x	x				x			x	
Honduras	x		x				x		x			x		
Jamaica		x		x			x			x			x	
Mexico	x		x			x				x		x		
Nicaragua	x		x				x			x				x
Panama			x			x			x			x		
Paraguay		x		x			x			x		x		
Peru	x		x				x			x		x		
Dom. Republic	x		x			x				x			x	
Trinidad-Tobago	x		x			x				x				x
Venezuela	x		x			x			x			x		

12. QUALITY CONTROL OF DRUGS

According to estimates appearing in a survey conducted in 1970, Latin American and Caribbean countries were spending approximately US$2 billion for medicaments at retail price levels, and such expenditures will rise to US$5 billion by 1980. Apart from the economic importance of this industry, the great number of new drugs, while they have provided great benefits, have also created complex problems that must be evaluated and controlled. Generally, in Latin America and the Caribbean area, the physical and financial resources allocated to the quality control of drugs are insufficient, and there are not even adequate programs of action to that effect. The analysis of the situation performed by the Ministers of Health of the Americas led to a series of recommendations for achieving the established regional goal.

REGIONAL GOAL: Implement in all countries programs to control the quality of domestically-produced and imported drugs.

The majority of the countries (5 out of every 6) have set themselves goals for the development of this field.

One of the recommendations of the Ten-Year Plan is to establish in each country a unified agency or an effective coordinating system for the conduct of drug control programs. Fifteen countries (3 out of every 4 report that such agency exists; the limited resources for analysis and evaluation, as well as for field activities, however, probably render most of them inoperative.

In 11 countries--over one-half of those that submitted reports--there is legislation which presumably is adequate to support control activities, but which, again for lack of technical resources, it is not feasible to enforce. Laboratory facilities for the analysis and evaluation of drugs are insufficient in most countries (7 out of 10). Drug and medicament evaluation and registration systems are considered adequate by one-half of the countries.

13. ACCIDENT CONTROL

	Deaths from accidents of all types, per 100,000 inhabitants		Deaths from traffic accidents, per 100,000 inhabitants		National program for control of traffic accidents					
					Exists	Non-existent	Projected	Intersectoral coordination		
	1971	1980	1971	1980				Adequate	Not adequate	Projected
Barbados	33.8		18.6			x			x	
Bolivia			47.4			x			x	
Brazil	56.9					x			x	
Canada	71.1		26.5			x			x	
Colombia	45		7.1		x				x	
Costa Rica	28.7		16.7		x				x	
Chile	90.9		20.8		x				x	
Ecuador	50.0	65.0	20.0	20.0			x			x
El Salvador	74.5		12.7							
United States	55.0		25.9		x					
Guatemala	37.3		8.2							
Guyana						x			x	
Honduras	*70.6/1					x				
Jamaica	*25.8/2		*6.9/2			x			x	
Mexico	47.8	45.4	6.5	5.0	x			x		
Nicaragua	89.2		13.6				x			x
Panama	50.8		15.3			x			x	
Paraguay	32.9	39.0	13.5	16.0		x				
Peru	34.4	25.2	9.2	6.8		x			x	
Dom. Republic	18.3		8.6		x				x	
Trinidad-Tobago	38.7		17.5		x			x		
Venezuela	46.8	57.5	24.5	34.5		x	x		x	

* Source: "Health Conditions in the Americas, 1969-1972," PAHO
/1 Years 1971-1972 /2 Years 1970-1971

13. ACCIDENT CONTROL

REGIONAL GOAL: Reduce the proportion of traffic and industrial accidents and of those occurring in the home and in places of recreation and tourist resorts, and thereby reduce the number of deaths and disability cases.

In 1971, accidents of all types were one of the five major causes of death in most countries in the Region, and the major cause in some age groups. The mortality rates of 20 countries which submitted reports range between 18.3 and 90.9 deaths per 100,000 inhabitants, with a mean level of 47 per 100,000. Deaths due to traffic accidents, particularly, are increasing in the Region, and in certain countries account for almost 40% of all accidental deaths, ranking among the first 10 causes of death. Furthermore, depending on the rates in the various countries, for every traffic accident death there are from 10 to 35 persons whose health is temporarily or permanently impaired.

This and additional information was analyzed by the Ministers of Health, who included provisions on this subject in the Ten-Year Plan to call attention to this problem, suggesting a series of recommendations the implementation of which, in view of the nature of the subject, will only be possible through a close intersectoral coordination and a community effort with the immediate aim of providing emergency medical services and medical rehabilitation, and the indirect aim of changing life styles.

Only five countries established numerical goals for 1980, and only two of them presume that they will achieve a reduction in mortality from accidents of all types and particularly from traffic accidents.

Only one country in every three has a national program for the prevention of traffic accidents. At the same time, however, the necessary intersectoral coordination to ensure the operation of a program of this nature is considered adequate in only two countries.

III. COMPLEMENTARY SERVICES

A. NURSING

1. Nursing system

	1.1 Definition of nursing functions for different levels of care				1.2 Definition of technical standards for different levels care				1.3 Definition of type and quantity of nursing personnel required				1.4 Identification and design of information system for control			
	Defined	Partially defined	Not defined	Projected	Defined	Partially defined	Not defined	Projected	Defined	Partially defined	Not defined	Projected	Completed	Partial	Not done	Projected
Barbados		x			x					x			x			
Bolivia	x					x				x						x
Brazil			x				x				x				x	
Canada		x				x				x				x		
Colombia	x				x				x					x		
Costa Rica		x				x					x				x	
Chile	x					x			x					x		
Ecuador	x					x			x						x	
El Salvador	x					x			x					x		
United States		x				x				x				x		
Guatemala	x				x					x				x		
Guyana		x				x			x					x		
Honduras		x				x				x					x	
Jamaica		x				x				x				x		
Mexico		x				x				x				x		
Nicaragua	x				x				x					x		
Panama		x		x		x		x		x		x		x		x
Paraguay	x				x				x					x		
Peru		x				x		x		x					x	x
Dom. Republic	x				x				x					x		
Trinidad-Tobago		x				x			x					x		
Venezuela	x			x /1	x			x /1	x			x /1	x			x /1

/1 Revision

A. NURSING

REGIONAL GOAL: Organize nursing in at least 60% of the countries, as a system in which the level of nursing care and the staffing required to meet the health goals of each country are defined. Provide the population with nursing care which is free of risk for the patient in 60% of the hospitals with 100 beds or more and in 60% of community health services.

The goals and recommendations concerning nursing focus on the adoption of a policy of promoting nursing activities, defining an adequate nursing system, improving the quality and extent of service coverage, research, developing information for evaluation and control, and training qualified personnel (with goals which are covered and evaluated in the section on human resources).

1. NURSING SYSTEM

Less than one-half of the countries report that they have a definition of nursing functions for different levels of care and of the type and quantity of nursing personnel required. The remaining countries have only reached a partial definition of such functions or of their personnel requirements, or have not reached such definition. Similarly, the technical standards for different levels of care have been defined in less than one-third of the countries. The identification and design of the information system for the control of activities has been done only in part or has not been done in the great majority of countries.

Thus, it is evident that at the time of entry into effect of the Ten-Year Plan, more than one-half of the countries had not even defined the components of the existing nursing systems, nor the extent of their organization and of their relation to the general health system. This situation reveals serious deficiencies in the nursing systems existing in the Region.

A. NURSING (continued)

	2. Quality of nursing services															
	2.1 Definition of nursing care standards								2.2 Administrative structure of nursing services							
	2.1.1 In care institutions or units				2.1.2 In community services				2.2.1 In care institutions or units				2.2.2 In community services			
	Defined	Partially defined	Not defined	Projected	Defined	Partially defined	Not defined	Projected	Organized	Partially organized	Partially organized	Projected	Organized	Partially organized	Not organized	Projected
Barbados	x				x				x				x			
Bolivia		x				x			x				x			
Brazil		x				x				x				x		
Canada		x				x			x				x			
Colombia		x				x				x				x		
Costa Rica		x				x			x				x			
Chile		x			x				x				x			
Ecuador		x				x				x				x		
El Salvador	x				x				x				x			
United States		x				x			x				x			
Guatemala		x			x					x			x			
Guyana		x				x				x			x			
Honduras		x				x			x						x	
Jamaica		x					x		x					x		
Mexico		x				x			x				x			
Nicaragua	x					x			x					x		
Panama		x		x		x		x		x		x		x		x
Paraguay	x				x				x				x			
Peru		x				x		x		x				x		x
Dom. Republic	x				x				x					x		
Trinidad-Tobago		x				x			x				x			
Venezuela	x			x	x/1			x/1	x			x/1	x			x/1

/1 Revision

2. QUALITY OF NURSING SERVICES

One of the means to facilitate the provision of a safe level of care to patients is the establishment of standards that define not only the content of such care, but also the expected level of quality. At the beginning of the decade, there were few countries that had defined such standards, both with respect to the care of patients in institutions and with respect to community services.

At the same time, it is noted that almost two out of every three countries had organized the administrative structure of nursing services, both in health care institutions or units and in the community. In view of the already-mentioned lack of definition of nursing care standards, this gives rise to doubts as to the adequacy of nursing organization, as well as to its very objectives.

A. NURSING (conclusion)

	3. Coverage of nursing services									
	3.1 Preparation of technical and administrative manuals for the use of auxiliaries				3.2 Percentage of auxiliary workers with training		3.3. Supervisory activities organized and in operation			
	Manuals exist	Manuals incompl. or in prep.	Non-existent	Projected	1971	1980	Yes	Partially or inadequate	Not carried out	Projected
Barbados			x		61.3		x			
Bolivia	x				9.7	50		x		
Brazil	x							x		
Canada	x				100		..	..	..	..
Colombia		x			45	70		x		
Costa Rica	x				87	100	x			
Chile	x				85	90		x		
Ecuador		x			77.2 /1	100			x	
El Salvador		x			80	92	x			
United States	x				..	..	x			
Guatemala	x				63	80	x			
Guyana			x		5.5	100		x		
Honduras		x			60	100		x		
Jamaica		x			..			x		
Mexico	x				26	60	x			
Nicaragua	x				76 /2	100	x			
Panama		x		x	50	100		x		x
Paraguay	x				82 /2	100	x			
Peru		x			31	90			x	
Dom. Republic	x				33	100	x	x /3		
Trinidad-Tobago		x			85	100	x			
Venezuela	x				60	80	x			

/1 1973 /2 1969 /3 Partial implementation

3. COVERAGE OF NURSING SERVICES

Technical and administrative manuals for the use of auxiliary nursing personnel are available in only slightly over one-half of the countries. With respect to the remaining countries, in two of them such manuals do not exist and in the others they are incomplete or in preparation.

The percentage of auxiliary nursing personnel with training, without specifying the quality of the latter, ranges between 5.5% and 100% in the 19 countries which submitted reports, with a mean level located at aproximately 60 per cent. Seventeen countries intend to raise such percentage by 1980, 10 of them to 100% and the remaining seven to percentages ranging between 50% and 92%.

Supervisory activities are organized and in operation in one-half of the countries and are partial or inadequate in the remainder.

The high percentage of untrained auxiliary personnel, together with the lack of standards, manuals and of a system of permanent supervision, gives rise to doubts as to the adequacy and appropriateness of the care that is provided as compared with the requirements of the system and, what is more important, as to whether such care does not involve risks for the patients who receive it.

B. LABORATORIES

	National goals have been established for the organization, operation and development of a laboratory and blood bank system		1. Definition of the types of examinations to be made by the different care levels			2. Preparation of standards for equipment, personnel and operations for the laboratories, according to levels of care			3. Standards for operation of regional and national consultation and reference networks		
	Yes	No	Have been defined	Have not been defined	Projected	Standards prepared	Not prepared	Projected	Exist	Do not exist	Projected
Barbados		X	X			X				X	
Bolivia	X				X			X			X
Brazil	X				X			X			X
Canada	X		X			X			X		
Colombia	X		X					X			X
Costa Rica	X				X			X		X	
Chile	X		X			X					
Ecuador	X		X			X			X		
El Salvador		X					X			X	
United States	X			X		X			X		
Guatemala	X			X		X			X		
Guyana		X	X				X			X	
Honduras	X		X			X			X		
Jamaica	X		X			X			X /1		
Mexico											
Nicaragua	X		X					X		X	
Panama	X		X			X			X		
Paraguay	X		X			X			X		
Peru		X			X			X			X
Dom. Republic	X		X				X		X		
Trinidad-Tobago		X	X			X			X		
Venezuela	X		X			X			X		

/1 Partially

B. HEALTH LABORATORIES

According to estimates prepared at the beginning of the decade, in Central and South America only aproximately 10% of the outpatient health establishments without beds have laboratory service, while from 70% to 95% of the inpatient establishments with beds have some type of laboratory available. Apart from the poor coverage of services, the existing laboratories operate without close cooperation with one another, which makes it impossible to use more specialized additional services or reference services. There is often a noticeable overloading of central laboratories with routine analyses that could have been carried out by a network of auxiliary laboratories, which does not exist. The available laboratory resources are insufficient to support disease control programs--especially for communicable diseases--and medical care programs, more than ever in rural areas, since in most countries they are concentrated in the metropolitan areas, with an insufficient number of laboratories at the intermediate peripheral level.

Laboratories for the control of water, foods, biological products, and drugs require a strong boost to their development, to overcome the scarcity of personnel, materials, equipment, space, etc. Apart from the inherent problems from which the laboratories are suffering, a basic problem appears to concern the lack of a definite policy for the development of laboratory services, aiming at the establishment and operation of a national system, coordinated with the organization of a system of different levels of health care, based on their complexity.

Twenty-one countries replied to the evaluation questionnaire. Sixteen of them (almost 4 out of 5) have set themselves national goals for the decade concerning the organization, operation and development of a laboratory and blood bank system.

The definition of the type of laboratory examinations to be made at each of the different care levels has been established in 14 countries (7 out of every 10). In two countries, such definition has not been established, and in four it is planned to do so.

Standards concerning the equipment, personnel and operation of the laboratories at the different levels of health care have already been prepared in 12 countries (almost 6 out of 10). In six of the remaining countries, it is planned to prepare such standards.

In 11 countries (almost one-half), there are standards for the operation of national and regional consultation and reference networks, and in four more it is planned to prepare them.

B. LABORATORIES (conclusion)

	4. Percentage of units with regular physician, having laboratory service		5. Organization of blood bank networks, according to levels of care, with central reference banks and consonant with the regionalization of services				6. Development of facilities for the preparation and control of biologicals for human and animal use				
	1971	1980	Have been organized	In partial operation	Non-existent	Projected	Plans in operation	Not provided	Projected	Supply to other countries projected	
										Yes	No
Barbados	25				x					x	
Bolivia					x		x			x	
Brazil					x				x	x	
Canada			x				x				
Colombia							x				
Costa Rica	48	100		x			x			x	
Chile	30	35	x				x			x	
Ecuador	10.9	45			x		x			x	
El Salvador	45				x		x				x
United States			x				x				/1
Guatemala	7.7	100			x		x			x	
Guyana				x				x			
Honduras	40	90		x				x			
Jamaica			x					x			x
Mexico											
Nicaragua	100				x			x			
Panama	60	100		x		x		x			
Paraguay	35	100									
Peru	55	90				x	x			x	
Dom. Republic	90	100		x			x				
Trinidad-Tobago	35	40		x					x		x
Venezuela	90	100		x			x				x

/1 Activity of the private sector

Only 14 countries were able to report on the percentages of health care units with a physician in regular attendance having laboratory service. Such percentages range between 7.7% and 100%, with a mean level located at approximately 40%. Seven of those countries (one-half) have resolved that by 1980 100% of the units with a physician in regular attendace will have laboratory service. The other countries range between 35% and 90%.

With respect to blood banks, only four countries (1 out of every 5) state that they have an organization of blood bank networks, according to levels of care, with central reference banks and consonant with the regionalization of health services. Seven other countries (almost 2 out of 5) have a partial organization of such networks. In the remainder (8 countries), it does not exist.

C. MEDICAL REHABILITATION

D. HEALTH EDUCATION

	Goals have been established in this field		Inclusion of basic rehabilitation services in the medical care programs				Goals have been established in this field		Proposed strategies									
	Yes	No	Yes	Yes, but	No	Expansion projected	Yes	No	Definition of a national policy	Incorporation into the planning process	Strengthening of peripheral levels	Training of specialized personnel	Training of health personnel	Training of teachers and professors	Inclusion of activities in health programs	Inclusion in curricula of prim., second., schools, etc.	Incorporation in community participation process	Publications and public information
Barbados		x	x			x	x											
Bolivia	x			x			x				x	x			x	x		
Brazil		x						x										
Canada		x	x				x				x							x
Colombia	x		x					x		x								
Costa Rica	x			x			x										x	
Chile	x		x				x		x	x	x	x					x	
Ecuador	x			x			x				x		x					
El Salvador								x										
United States	x							x						x				/1
Guatemala		x			x			x										
Guyana		x		x			x			x		x	x	x	x			
Honduras		x		x														
Jamaica		x		x			x					x	x		x			
Mexico	x		x				x					x	x	x	x	x	x	
Nicaragua	x		x					x										
Panama	x			x			x							x				
Paraguay		x		x				x			x							
Peru	x		x				x				x					x		
Dom. Republic		x		x			x				x							
Trinidad-Tobago		x		x				x										
Venezuela	x		x				x					x	x					x

/1 Also includes, as strategies, coordination of public and private groups, emphasis on population groups with special needs, and research and evaluation of health education methods.

C. MEDICAL REHABILITATION

REGIONAL GOAL: Include, in all medical care programs, basic rehabilitation services to ensure that the disabled persons being served by them can return to as normal a life as possible.

It is estimated that at the beginning of the decade there were in Latin America and the Caribbean area no fewer than 10 million persons (3.5% of the population) suffering from some form of disability, who will not be able to realize their physical potential unless rehabilitation services are available to them. Generally speaking, the disabilities are of a locomotor, sensory, cardiac or respiratory nature, and include problems such as paralysis, amputations, speech, hearing, or visual defects, and activity restricted by cardiac or pulmonary disorders.

Technology is available to improve considerably the well-being of disabled persons, but its application is limited as a result of the scarcity of existing resources, both of personnel assigned to that task, and of financing for equipment, materials and other facilities, which are not provided because of a lack of national policies allocating to this field the priority that it deserves. Since the adoption of the Ten-Year Plan, however, several countries have moved in the direction of achieving its goals. Ten of them have established their own national medical rehabilitation goals, and its basic services have already been included in the medical care programs of almost one-third of the countries, although such inclusion is insufficient or non-existent in one-half of them.

Shortly after the beginning of the Ten-Year Plan, some conceptual changes took place which will have to be considered in any future evaluation of such Plan. For example, there is a noticeably growing concern for a great number of disabled persons who could never have access to sophisticated services, but could benefit from a certain simple type of services rendered at their homes or near them by personnel trained by the presently existing cadre of specialists, who in turn will continue to provide more highly specialized services. Both the type of services which could be rendered and the personnel which could safely offer them are currently the subject of research.

D. HEALTH EDUCATION

REGIONAL GOAL: Organize health education as part of the process of active and informed participation of communities in all action for the prevention and cure of diseases.

At the beginning of the decade, all but two countries in the Region had health education services within the institutional structure of the health sector. As a result of the limited resources allocated to such services, however, they have been considerably limited at the operational level, with respect to both their coverage and the continuity of community educational activities. For the same reasons, a certain weakness was noticeable in health education planning and programming activities and, accompanying it, an insufficient coordination with the general educational systems and with other sectors and institutions active in the community. Consequently, generally speaking, it can be stated that the community is not always well informed or prepared to act as it should be expected in taking care of its own health, nor is it motivated to mobilize its resources to support the action taken by health care units.

In their replies to the evaluation questionnaire, 13 out of 20 countries report that they have set themselves goals for the development of the health education field during the decade. The strategies most commonly adopted for the achievement of such goals follow the recommendations made by the Ministers of Health, and consist of strengthening the peripheral levels, integrating activities with those of the health programs, training, both of specialists and of health personnel generally and teachers in schools and educational institutions, strengthening of the central units, distribution of educational material, and better use of mass communication media and, something which is very important, the integration and incorporation of their development in the community participation process.

E. EPIDEMIOLOGIC SURVEILLANCE

	Goals have been established for the organization, operation and development of the epidemiologic surveillance systems		1. National surveillance system							
			1.1 Surveillance system at the central level, within the administrative structure				1.2 Regional surveillance units			
	Yes	No	System exists	Being organized	Non-existent	Projected	In all regions	In some regions	Non Existent	Projected
Barbados	x			x					x	
Bolivia		x				x		x		
Brazil	x			x				x		
Canada		x		x			x			
Colombia										
Costa Rica	x		x							x
Chile	x		x							x
Ecuador	x			x						x
El Salvador	x		x				x			
United States	x		x				x			
Guatemala	x		x						x	
Guyana	x			x				x		x
Honduras	x		x				x			
Jamaica	x		x				x			
Mexico	x		x					x		
Nicaragua	x		x							x
Panama	x				x	x	x			x
Paraguay		x	x				x			
Peru	x			x						x
Dom. Republic	x			x			x			x
Trinidad-Tobago	x		x				x			
Venezuela	x		x					x		

E. EPIDEMIOLOGIC SURVEILLANCE

REGIONAL GOAL: Create and maintain epidemiologic surveillance units in accordance with the national organization and regionalization structure of each country, so as to ensure a continuous supply of information of the epidemiologic characteristics of health problems and the factors governing them, and thus enable timely action to be taken.

The purpose of epidemiologic surveillance programs is to have available, whenever it is required, information concerning the current situation and the epidemiologic evolution of diseases, as well as the factors that govern them, in order to anticipate new situations, predict changes in trends, recommend and evaluate control measures, and provide information on which to base health planning and programming.

Although several countries in the Region report the existence of general epidemiologic surveillance systems or specific systems for some diseases, the available information concerning the evolution of communicable diseases and the factors that govern it was mostly quite insufficient, revealing that actually epidemiologic surveillance left much to be desired, and the situation was similar in the area of chronic diseases.

The Ten-Year Plan places great emphasis on the problem of epidemiologic surveillance, which is reflected not only in the regional goal stated above, but also in the action required on individual program areas, including all communicable and chronic diseases. Similarly, the Plan includes recommendations for the development and improvement of the supporting mechanisms of surveillance systems, including the strengthening and improvement of health information systems, of laboratory services, of the training of human resources, of community participation, etc.

According to the information obtained from 21 countries for the evaluation of the Ten-Year Plan, 18 of them have set themselves goals for the organization, operation and development of their epidemiologic surveillance systems during the decade. In 12 of them (almost 3 out of 5), there was a surveillance unit at the central level, within the national administrative structure, in charge of the organization of the national system, of setting standards for its operation, of supporting and supervising the regional units, and of providing executive units with the necessary information for immediate action, both at the national and at the local level.

Regional epidemiologic surveillance units exist in all areas in nine countries, in some areas only in five countries, and in no area in seven countries. In eight countries there are projects to organize or expand the number of regional units.

E. EPIDEMIOLOGIC SURVEILLANCE (conclusion)

	1. National surveillance system (conclusion)										
	1.3 Technical standards of operation				1.4 Information system				1.5 Geographic coverage		
	Adequate	Deficient	Being revised	Projected	Efficient	Deficient	Being revised	Projected	Entire country	Part of the country	Under study
Barbados				x			x		x		
Bolivia			x			x				x	
Brazil			x				x			x	
Canada			x				x		x		
Colombia											
Costa Rica			x				x		x		
Chile			x				x				x
Ecuador				x			x			x	
El Salvador	x				x				x		
United States	x				x				x		
Guatemala	x					x			x		
Guyana			x				x			x	
Honduras	x				x				x		
Jamaica		x					x		x		
Mexico			x				x		x		
Nicaragua			x				x		x		
Panama			x				x		x		
Paraguay			x				x		x		
Peru				x		x				x	
Dom. Republic			x			x			x		
Trinidad-Tobago			x				x		x		
Venezuela			x				x		x		

Only four countries consider the technical standards governing the operation of their national epidemiologic surveillance system to be adequate. In all the remaining countries but one, such standards are being revised, or there are projects to prepare them. While this situation shows the precarious conditions under which the systems have been operating, it also shows the intention of countries to introduce improvements in them, in conformity with the recommendations of the Ten-Year Plan.

An epidemiologic surveillance system basically consists of a constant flow of information. Even if the system could rely on a perfect set of analytical and operational techniques, the effectiveness and efficiency of its operation will depend almost entirely on the effectiveness of the information system that supplies it. Only three countries regard the information system as being efficient; in four more, it is considered deficient, and in the majority (2 out of 3) it is being revised.

With respect to the geographic coverage of the epidemiologic surveillance system, a majority of 15 countries (over 2 out of 3) have full coverage, while in five countries it covers only part of the country (in some of the latter, the so-called registration area). In one country, the geographic coverage is under study.

IV. PLANNING AND DEVELOPMENT OF THE INFRASTRUCTURE

1. THE HEALTH SYSTEM

	Goals have been established for the structure and functioning of the health services system		1.1 Definition of the system			1.2 Components of the system			1.3 Type of system			1.4 Formalization of the system		
	Yes	No	Defined	In process of definition	Not defined	Entire sector	Entire public subsector	Part of the public subsector	Not defined	Single	Coordinated	Not defined	Formalized	In process of formalization	Not formalized
Barbados	x /1			x			x				x				x
Bolivia		x						x			x				
Brazil	x		x			x				x			x		
Canada	x		x			x				x			x		
Colombia	x		x				x		x			x			
Costa Rica	x			x			x		x				x		
Chile		x /2		x		x				x					x
Ecuador	x			x			x		x			x			
El Salvador	x		x				x			x			x		
United States	x		x					x		x					x
Guatemala	x		x				x			x			x		
Guyana	x		x				x			x			x		
Honduras	x		x					x	x						x
Jamaica		x		x			x			x		x			
Mexico	x		x				x			x		x			
Nicaragua	x			x			x			x		x			
Panama	x			x				x	x				x		
Paraguay		x		x				x		x			x		
Peru	x		x			x				x		x			
Dom. Republic	x		x					x	x			x			
Trinidad-Tobago	x		x			x				x		x			
Venezuela	x		x					x		x		x			

1/ Partially 2/ In process

REGIONAL GOAL: Install and develop in each country in the Region a health system adapted to its national characteristics and determined in the light of a sectoral policy.

The health services system of a country consists of those elements--personnel, physical facilities and other resources--organized formally or informally, specifically assigned to performing certain actions on persons or on their environment (health services), for the purpose of promoting, protecting and restoring the health of the population.

All countries have a health services system, of different degrees of complexity and integration, with varying arrangements in its formal and informal organizatiom with a greater or lesser number of component institutions, public or private, operating with different technological components, attaining in its operation different levels of coverage, effectiveness, efficiency, etc. The present condition of these systems is the result of the operation, over many years, of various guidelines set by the health policies of the time, which, as stated by the Ministers of Health, it was necessary to revise, readapt or restate, for the purpose of establishing objectives consonant with national general development objectives. Such objectives concern not only the health situation that it is desired to obtain, but also define the configuration and functional characteristics of the health services system required in order to achieve the proposed health objectives.

It is easy to understand why the regional goal stated above of installing and developing a health services system was proposed, and why 18 out of the 22 countries participating in the evaluation (4 out of 5) have set themselves goals of some kind concerning the organization and operation of their health systems.

National systems require a number of modifications and adaptations, which could not be carried out without an analysis of the present system making it possible to present feasible and viable proposals. Therefore, it is a prerequisite to have a thorough definition of the system, meaning by that term the identification of the elements and components that constitute it, of their interrelations and of the environmental factors that affect it. According to the replies from 21 countries, up to the year 1974 13 countries (almost 3 out of 5) had already defined their system, while the remaining eight were in the process of defining it. Naturally, it is not evident from the replies to what extent it was defined in each case, nor which procedure was followed in so doing.

Out of the 21 countries which had defined their system or were in the process of defining it, only five (somewhat more than 1 out of 5) regarded it as consisting of all the institutions in the Health Sector (public and private). Ten other countries (more than 2 out of 5) regard it as consisting of all the institutions composing the public sector only, which provides different degrees of institutional coverage, depending on the importance of the private subsector. Finally, there are six countries (over 1 out of 5) which consider the subsystem composed of part of the public subsector (the Ministry of Health alone, or together with Social Security).

With respect to the type of system, six countries state that their system is "single," that is, technically and administratively subordinated to a single central authority. Three of them define their system as consisting of the public subsector, and the other three of only part of such subsector. In the remaining 14 countries (2 out of 3), on the other hand, the system is defined as being of the "coordinated" type.

Only nine countries (slightly over 2 out of 5) have a formalized health system, that is, governed by law or by any type of formal provision or regulations which make it mandatory for everybody. In eight other countries, it is in the process of formalization.

2. HEALTH POLICY

	Goals have been established with regard to health policies		2.1 Definition		2.2 Formalization				2.3 Priorities	2.4 Term	2.5 Coverage							
					Formalized		In process				Politico-administrative		Institutional		Program areas		Population	
	Yes	No	Defined	In process of defin.	Not defined	Declaratory	By law	Declaratory	By law	Not formalized	Established	Not established			Entire country	Part of country	Mixed	All instit.	Some instit.	All prog. areas	Some prog. areas	No prior. groups	W/prior. groups
Barbados	x			x			x			x			1973-77	x			x		x			x
Bolivia	x		x			x				x			1973-78	x				x	x			x
Brazil	x			x			x									x		x		x		x
Canada	x			x			x			x			1975-78	x				x		x		x
Colombia	x		x			x				x			1975-78	x			x		x			x
Costa Rica	x		x			x				x			1974-80	x			x		x		x	
Chile		x		x			x			x			..	x			x		x		x	
Ecuador	x		x			x				x			1973-77	x				x	x		x	
El Salvador	x		x			x				x			1973-77	x			x		x			x
United States	x		x			x				x			1977-81			x		x		x		x
Guatemala	x		x			x				x			1974-80	x			x		x			x
Guyana	x		x						x	x			1971-80	x			x		x		x	
Honduras	x		x			x				x			1974-80	x				x		x		x
Jamaica	x			x			x					x	1974-80	x			x		x			x
Mexico	x		x			x			x	x			1974-83	x					x		x	
Nicaragua	x		x			x				x			1976-80	x			x		x		x	
Panama	x		x				x			x			1972-81	x				x	x			x
Paraguay	x			x			x			x			1976-80	x				x	x			x
Peru	x		x				x			x			1975-78	x			x		x			x
Dom. Republic	x		x			x				x			1973-80	x				x	x		x	
Trinidad-Tobago	x		x				x			x			1967-76	x			x		x		x	
Venezuela	x		x			x				x			1975-80	x				x	x			x

2. HEALTH POLICY

REGIONAL GOAL: Define in each country a health policy consistent with socioeconomic development, clearly specifying its objectives and the structural changes required to achieve them.

Twenty-one countries stated that they had established goals concerning the definition of their health policies. This fact indicates a massive recognition of the importance of the definition of a health policy and the interest of countries in complying with this goal of the Ten-Year Health Plan.

2.1 Definition of the policy

Sixteen countries had defined their policy by the year 1974, while the remaining six out of the 22 which submitted reports were in the process of defining it.

2.2 Formalization

In 16 countries, the policy had been formalized in a declaratory form, and in four by national law; in six countries, the policy was in the process of formalization, and in one it had not been formalized.

2.3 Priorities

Twenty-one countries establish priorities in their health policy, whether it has been defined or not.

2.4 Terms

According to the statements by 20 countries, the terms established for their policies range between four and 10 years. Only three countries had made a beginning between 1967 and 1972; in the year 1973, five countries began to set terms for their policies, and five more did so in the year 1974. The seven remaining countries indicated that their terms would begin between 1975 and 1977.

2.5 Coverage

Twenty countries report that the political and administrative coverage of their health policy extends to the entire country. In two countries, on the other hand, the coverage of certain aspects of the policy is nationwide, and that of certain other aspects extends to part of the country only.

In 11 countries, the coverage of health policy is such that it covers all institutions in the health sector; in 10 other countries, on the other hand, the scope of the policy is only institutional, which means that it covers only one or more institutions in the health sector.

In 18 countries, the policy covers all program areas for the sector, while in four countries its scope is limited to some program areas.

In eight countries, the policy does not provide for the coverage of any prioritiy group; on the other hand, in the remaining 14 countries, the policy provides for priority care for certain population groups.

3. STRATEGIES

	Goals have been established for the formulation and implementation of strategies		3.1 Formulation of strategies		3.2 Coverage of strategies		3.3 Programming of strategies			3.4 Components of strategy programming					
										3.4.1 Feasibility analysis					
										Completed			Projected		
	Yes	No	Formulated	In process of formulation	All policy areas	Some policy areas	Programmed	Programming partial or in process	Not programmed	Projected	For all	For some	No	For all	For some	No
Barbados	x /1			x		x		x							x	
Bolivia	x		x		x			x				x				
Brazil		x		x		x				x			x		x	
Canada	x		x		x			x				x				
Colombia	x		x		x		x				x					
Costa Rica		x		x	..	..			x	x						
Chile	x		x		x		x					x			x	
Ecuador	x		x		x		x				x					
El Salvador	x		x			x		x				x		x		
United States	x		x			x		x				x			x	
Guatemala	x		x		x		x					x		x		
Guyana	x		x		x		x						x	x		
Honduras	x		x		x		x					x			x	
Jamaica		x		x		x		x				x			x	
Mexico	x		x		x		x				x					
Nicaragua	x		x		x		x				x					
Panama	x		x		x			x			x					
Paraguay	x			x	x		x				x			x		
Peru	x		x		x		x				x					x
Dom. Republic	x		x			x		x								x
Trinidad-Tobago	x		x			x		x				x			x	
Venezuela	x		x			x		x				x		x		

/1 Partially

3. STRATEGIES

In 18 out of the 21 countries which submitted reports, goals have been established for the formulation and implementation of strategies.

3.1 Formulation of strategies

According to the statements by 15 out of the 21 countries, their health strategies have already been formulated; they were in the process of formulation in the remaining six.

3.2 Coverage of strategies

In 13 of the 20 countries which replied, the strategies have been designed to include all the areas covered by the policy. In the remaining seven, the coverage extends to only some of these areas.

3.3 Programming of strategies

According to reports, 10 out of 21 countries have already programmed their strategies, nine are in the process of programming or have programmed them in part, and two have not programmed them but plan to do so.

3.4 Components of strategy programming

3.4.1 Feasibility analysis

Seven out of 18 countries state that they have already completed the feasibility analysis for all their strategies, nine have done so for only some of them, and two have not performed any feasibility analysis. With the exception of one of the countries mentioned above, all expect to perform a feasibility analysis for all or some of their strategies.

3. STRATEGIES (continued)

	3.4 Components of strategy programming (conclusion)																			
	3.4.2 Analysis of internal consistency				3.4.3 Analysis of consistency with policy				3.4.4 Adjustment of strategies				3.4.5 Consolidation of strategies and initiation of programs				3.4.6 Formulation of technical and administrative standards				3.4.7 Adjustment to operating levels			
	Completed		Projected		Completed		Projected		Completed		Projected		Completed		Projected		Completed		Projected		Completed		Projected	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Barbados				X				X				X				X				X				X
Bolivia			X				X			X				X				X		X				
Brazil																								
Canada		X		X		X		X		X			X	X				X	X		X				X
Colombia			X		X						X		X						X				X	
Costa Rica	X				X				X				X				X						X	
Chile													X				X				X			
Ecuador		X				X				X			X				X						X	
El Salvador	X				X				X				X				X				X			
United States	X				X					X				X			X						X	
Guatemala	X				X					X				X					X				X	
Guyana		X	X			X	X				X		X					X	X			X	X	
Honduras	X				X				X				X		X				X		X			
Jamaica		X		X		X		X		X				X			X		X			X	X	
Mexico	X				X				X				X				X				X			
Nicaragua	X				X				X				X				X						X	
Panama	X				X					X				X	X		X				X			
Paraguay	X				X				X				X						X				X	
Peru	X				X				X				X				X				X			
Dom. Republic	X				X					X			X				X				X			
Trinidad-Tobago		X	X		X					X				X	X		X		X			X	X	
Venezuela	X						X				X			X			X				X			

3.4.2 Analysis of internal consistency

Twelve countries report that they have completed the analysis of internal consistency of their strategies. Four of those which did not do so expect to perform such an analysis in the future.

3.4.3 Analysis of consistency with policy

Thirteen countries report that they have carried out the analysis of consistency of their strategies with policy. Of the seven remaining countries which reported that they had not carried out such analysis, only three expect to do so.

3.4.4 Adjustment of strategies

Out of the 20 countries which submitted reports, only seven state that they have completed the adjustment of their strategies, and eight of the 13 which did not do so expect to carry it out.

3.4.5 Consolidation of strategies and initiation of programs

The consolidation of strategies and initiation of programs have been carried out in 13 of the 20 reporting countries; the remaining seven expect to do so.

3.4.6 Formulation of technical and administrative standards

Out of 21 countries, 11 report that they have formulated the technical and administrative standards for the operation of the system, and nine expect to do so.

3.4.7 Adjustment to operating levels

the stage of adjustment of strategies to operating levels has been completed in 10 out of 21 countries which submitted reports, while in 10 more such adjustment is expected to take place.

3. STRATEGIES (continued)

3.5 Strategy programming by program areas

	3.5.1 Programming of services to individuals			3.5.2 Programming of environmental services			3.5.3 Programming of community participation			3.5.4 Programming of investments			3.5.5 Programming of human resources			3.5.6 Programming of administrative improvements		
	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected
Barbados		x				x		x				x			x			x
Bolivia	x			x					x	x					x			x
Brazil																		
Canada		x	x		x			x			x			x			x	
Colombia	x			x					x			x	x			x		
Costa Rica	x			x			x			x			x			x		
Chile			x			x			x			x			x			x
Ecuador	x			x			x			x			x			x		
El Salvador	x			x			x			x			x			x		
United States	x			x			x			x			x			x		
Guatemala	x			x			x			x								
Guyana		x	x		x	x		x	x		x	x		x	x		x	x
Honduras	x			x			x			x						x		x
Jamaica		x			x	x		x	x									
Mexico	x			x			x						x			x		
Nicaragua	x			x			x			x			x			x		
Panama	x			x			x			x				x	x		x	x
Paraguay	x					x	x			x			x			x		
Peru	x			x					x	x						x		
Dom. Republic	x			x				x			x			x			x	
Trinidad-Tobago		x	x		x	x		x			x	x		x	x		x	x
Venezuela	x			x					x	x			x					x

3.5 Content of strategy programming

3.5.1 Programming of services to individuals

Fifteen out of 21 countries have programmed services to individuals; four of the remaining countries expect to do so in the future.

3.5.2 Programming of environmental services

Such programming has been carried out in 14 out of 21 countries, and is expected to be carried out in six of the remaining countries.

3.5.3 Programming of community participation

Such programming has been carried out in 10 out of 21 reporting countries. It is projected in seven of the 11 countries which did not carry it out.

3.5.4 Programming of investments

Out of the 20 reporting countries, 11 state that they have carried out the programming of their investments, while this is projected in five of the eight countries which have not yet carried it out.

3.5.5 Programming of human resources

Nine out of the 20 countries report that they have carried out the programming of human resources, and nine of the remaining 11 state that they have projected such programming.

3.5.6 Programming of administrative improvements

The programming of administrative improvements has been carried out in 10 of the 20 reporting countries and is being projected in eight of the remaining 10 countries.

3. STRATEGIES (conclusion)

	3.5 Strategy programming by program areas (conclusion)												3.6 Short-term programming					
	3.5.7 Programming of financing			3.5.8 Programming of information-evaluation control systems			3.5.9 Programming of research			3.5.10 Programming of other areas						Participation of local level		
	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	done	Not done	Projected	Yes	No	Partial
Barbados	x				x			x			x		x			x		
Bolivia	x					x			x	x					x	x		
Brazil																		
Canada		x			x	x		x	x		x			x	x			x
Colombia			x	x					x		x		x					
Costa Rica	x			x				x			x			x	x	x		
Chile		x				x	x						x					x
Ecuador		x		x				x						x	x	x		
El Salvador	x			x				x			x		x			x		
United States			x	x			x				x		x					x
Guatemala			x			x			x		x		x			x		
Guyana		x			x	x		x			x		x					x
Honduras	x					x		x			x		x			x		
Jamaica		x	x		x			x			x			x	x		x	
Mexico						x	x			x			x			x		
Nicaragua	x			x			x			x			x					x
Panama	x			x				x			x		x					x
Paraguay	x			x			x				x		x					
Peru	x					x			x				x			x		
Dom. Republic	x			x				x			x		x			x		
Trinidad-Tobago		x	x		x	x		x	x		x	x	x					x
Venezuela	x					x			x		x		x			x		

3.5.7 Programming of financing

Such programming has been carried out in 11 of the 20 countries, and is projected in five of the remaining nine.

3.5.8 Programming of an information-evaluation-control system

Out of 21 countries, nine report that they have completed the programming of such a system, and 10 of the remaining 12 expect to do so.

3.5.9 Programming of research

Research has been programmed in only five out of 21 countries, while seven of the remaining 16 state that they have projected such programming.

3.5.10 Programming of other areas

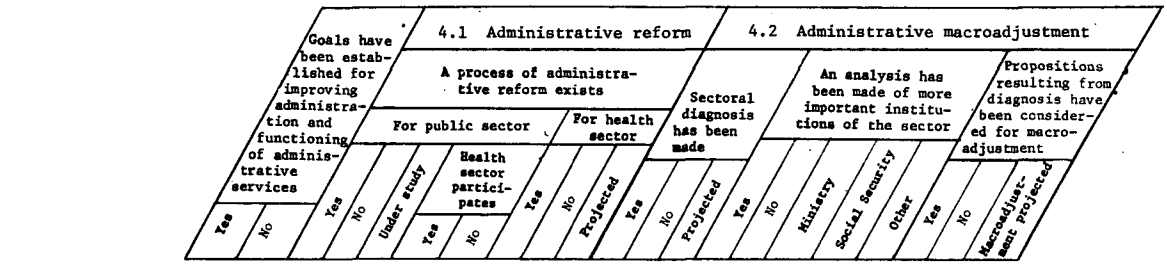
Only six out of 19 countries state that they have programmed other areas, and one has projected such programming.

3.6 Short-term programming

Short-term programming is reported to have been completed in 16 out of 21 countries, and the remaining five state that they have projected such programming.

Eighteen out of 19 countries state that the local levels have participated in the short-term programming, although in seven of them such participation has been only partial.

4. ADMINISTRATION



Barbados	x			x		x			x		x		x		x		x			x
Bolivia	x		x			x		x				x			x					x
Brazil	x		x			x		x		x			x		x	x	x	x		
Canada		x		x					x		x									
Colombia	x		x			x		x			x		x		x		x	x		
Costa Rica	x			x				x			x		x		x	x	x			x
Chile	x		x			x		x			x		x		x		x	x		
Ecuador	x		x			x		x				x	x		x					x
El Salvador	x		x			x		x			x		x					x		
United States	x		x			x		x				x						x		
Guatemala	x		x			x		x			x		x		x	x	x	x		
Guyana	x				x	x		x				x		x						
Honduras	x			x			x	x				x		x			x			
Jamaica	x			x			x	x				x			x					
Mexico	x		x					x			x			x		x	x	x		
Nicaragua	x			x					x			x			x					
Panama	x		x			x		x			x			x		x	x	x		
Paraguay		x		x					x		x			x		x	x	x		
Peru	x		x			x			x			x			x					x
Dom. Republic	x				x				x			x		x			x			
Trinidad-Tobago		x	x			x		x		x		x								x
Venezuela	x		x			x		x			x		x							

4. ADMINISTRATION

Nineteen of the 22 countries reporting on this subject have set themselves goals for improving administration and the operation of administrative services.

4.1 Administrative reform

Thirteen countries report the existence of a process of administrative reform in the public sector, and in three of the remaining nine such reform is under study. In 14 countries in which such a process exists or is under study, the Health Sector is participating.

Sixteen countries report the existence of a process of administrative reform in the Health Sector, and in three countries such reform is projected.

4.2 Administrative macroadjustment

Ten of the 22 reporting countries state that they have made a sectoral diagnosis, and it is projected in one. Fifteen countries have made an analysis of the most important institutions in the sector. In 13 of them, it covers the Ministry of Health, in seven Social Security has also been included, and 10 countries have included other institutions.

In nine of the countries in which the sectoral diagnosis was done, the administrative macroadjustment took into account the proposals resulting from such diagnosis; the macroadjustment is also projected in six other countries.

4. ADMINISTRATION (continued)

	4.3 Adjustment of institutional administration																							
	4.3.1 Intrainstitutional restructuring									4.3.2 Organization of administratitive services according to operating levels									4.3.3 Organic legislation and regulations					
	Of the Ministry			Of Social Security			Of other institutions			Of the Ministry			Of Social Security			Of other institutions			Organic law of sector			Institutional organic regulations		
	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Yes	No	Projected	Exists	Nonexistent	Under study	Ministry	Social Security	Other
Barbados		x	x		x	x		x	x	x				x			x					x			x
Bolivia			x		x			x		x			x				x			x					x
Brazil	x			x			x			x			x						x			x	x	x
Canada		x		x							x			x			x			x					
Colombia	x			x			x			x						x	x			x			x	x	x
Costa Rica			x			x			x			x			x				x		x		x	x	x
Chile	x			x			x			x			x				x			x			x		x
Ecuador	x			x			x			x			x				x				x		x		x
El Salvador	x									x											x				
United States	x			x				x		x			x					x							x
Guatemala	x				x	x		x	x	x				x	x		x	x			x		x	x	x
Guyana			x								x										x				
Honduras	x					x	x			x						x	x					x		x	x
Jamaica			x							x										x					
Mexico	x			x			x			x			x				x				x		x	x	x
Nicaragua			x								x									x			x	x	x
Panama	x						x				x														
Paraguay		x								x										x					
Peru		x	x		x			x		x			x							x			x		x
Dom. Republic	x			x				x		x			x			x					x		x	x	
Trinidad-Tobago			x						x		x							x			x				
Venezuela			x						x											x					

4.3 Adjustment of institutional administration

4.3.1 Intrainstitutional restructuring

Eleven of the 22 reporting countries state that they have carried out the restructuring of the Ministry of Health, and nine of the remaining 11 expect to do so. On the other hand, only eight countries state that Social Security has been restructured, while this is projected in four other countries. Similarly, seven countries have carried out the restructuring of other institutions in the Health Sector, and five other countries expect to do so.

4.3.2 Organization of administrative services

The organization of the administrative services according to operating levels of the health system has been carried out in the health ministries of 15 out of the 21 reporting countries, while five more countries expect to do so. Eight countries report that such organization was performed at the Social Security institutions, and four countries also have projects for doing so. Finally, six countries report the establishment of such organization according to operating levels in other institutions in the health system, and three other countries expect to establish it.

4.3.3 Organic legislation and regulations

In seven out of 21 reporting countries, there is an organic law for the health sector, and in five of the remaining countries such organic law is under study. Existing institutional organic regulations are reported to cover the Health Ministry in 12 countries, Social Security in eight, and other institutions in the health sector in 13 countries.

4. ADMINISTRATION (continued)

4.3 Adjustment of institutional administration (continued)

4.3.4 Restructuring and adjusting administrative services

	(a) PERSONNEL				(b) BUDGET				(c) ACCOUNTS				(d) SUPPLIES			
	Yes	No	In process	Projected	Yes	No	In process	Projected	Yes	No	In process	Projected	Yes	No	In process	Projected
Barbados				X	X				X						X	
Bolivia		X			X				X					X		
Brazil			X				X				X				X	
Canada		X					X			X				X		
Colombia			X				X				X				X	
Costa Rica				X				X				X				X
Chile				X	X					X						X
Ecuador			X				X				X				X	
El Salvador		X				X				X				X		
United States	X				X				X				X			
Guatemala			X				X				X				X	
Guyana			X				X				X			X		
Honduras		X					X			X				X		
Jamaica	X					X			X				X			
Mexico	X				X				X				X			
Nicaragua				X				X				X				X
Panama			X					X			X				X	
Paraguay		X			X					X				X		
Peru			X		X				X						X	
Dom. Republic			X				X				X				X	
Trinidad-Tobago				X				X				X			X	
Venezuela	X				X				X				X			

4.3.4 Restructuring and adjustment of administrative services

Replies were obtained concerning the condition of the administrative services of 22 countries, providing the following information:

a) Personnel

Personnel services have been restructured and adjusted in four countries. This process is being carried out in eight countries, and in 10 it has not been carried out but is projected.

b) Budget

Services have been restructured and adjusted in eight countries, and such activity is in process in eight other countries. Out of the remaining six, four expect to do the same.

c) Accounting

The accounting services have been restructured and adjusted in seven countries, and such activity is in progress in seven more countries. Three of the remaining eight countries have projected it.

d) Supplies

The supply service has been restructured and adjusted in four countries; such activity is in progress in nine more countries and is projected in three of the remaining nine countries.

4. ADMINISTRATION (conclusion)

	4.3 Adjustment of institutional administration (conclusion)															
	4.3.4 Restructuring and adjusting administrative services (conclusion)												4.3.5 Preparation and issue of administrative procedure manuals for use at all administrative levels			
	(e) COMMUNICATIONS				(f) TRANSPORT				(g) GENERAL SERVICES							
	Yes	No	In process	Projected	Yes	No	In process	Projected	Yes	No	In process	Projected	Yes	No	In process	Projected
Barbados				x		x				x				x		
Bolivia			x				x					x			x	
Brazil			x				x				x				x	
Canada		x				x				x				x		
Colombia			x				x			x					x	
Costa Rica				x				x				x				x
Chile		x				x				x					x	
Ecuador			x				x				x				x	
El Salvador			x			x				x			x			
United States	x				x				x				x			
Guatemala			x				x				x				x	
Guyana		x					x				x					x
Honduras		x				x				x					x	
Jamaica		x				x			x						x	
Mexico	x				x				x						x	
Nicaragua				x				x				x				x
Panama		x					x			x					x	
Paraguay		x				x				x					x	
Peru				x			x				x				x	
Dom. Republic			x				x				x				x	
Trinidad-Tobago				x		x					x					x
Venezuela	x				x				x						x	

e) Communications

The communications services have been restructured and adjusted in three countries and action is being taken to that effect in seven more. In five of the remaining 12 countries, action is projected in this area.

f) Transportation

Only three countries state that they have restructured and adjusted their transportation services. Activities to that effect are being carried out in nine, and in two of the remaining 10 there are projects to do so in the future.

g) General services

Four countries report that such services have been restructured and adjusted; in seven other countries, such activity is in progress, and in three of the remaining 11 there are projects to do so.

4.3.5 Procedural manuals

Fourteen countries state that they are in the process of developing and introducing administrative procedure manuals for use at all administrative levels. Only two consider such action to be completed, while four more eventually expect to do so.

5. INFORMATION SYSTEMS

	Goals have been established for the organization and functioning of an information system		5.1 Organization of an information system				5.2 Coverage of the system							
							Political-administrative			Sectoral			Program area	
	Yes	No	Organized	In operation	Projected	Not planned	National	Partial	Mixed	Entire sector	Some institutions	Mixed	All programs	Some programs
Barbados	x					x		x			x			x
Bolivia		x												
Brazil	x				x		x			x			x	
Canada		x		x					x			x		x
Colombia	x			x			x			x			x	
Costa Rica	x		x				x			x				x
Chile	x				x		x			x			x	
Ecuador	x			x				x			x			x
El Salvador	x		x				x				x		x	
United States /1	x													
Guatemala		x			x			x			x			x
Guyana	x			x				x				x		x
Honduras	x			x			x			x			x	
Jamaica		x			x		x			x			x	
Mexico	x				x		x			x			x	
Nicaragua		x			x									
Panama	x		x				x			x			x	
Paraguay		x		x					x			x		
Peru	x			x					x			x		x
Dom. Republic	x				x			x			x		x	
Trinidad-Tobago		x			x		x			x			x	
Venezuela	x			x			x			x			x	

/1 Replies refer to activities at the federal level and not to the entire country. Since there are various activities under independent authorities even at the federal level, the replies should be considered only as approximations for numbers 5.1, 5.2, 5.4, 5.5.8 and 5.5.9.

5. INFORMATION SYSTEMS

REGIONAL GOAL: Establish and develop information, evaluation, control and decision-making systems with the depth and detail required by the administration and planning processes.

The process of planning the development of the health sector of the various countries, which took place during the last decade, clearly showed the obvious deficiencies in the information systems which supply the managerial and administrative processes at all their stages, and the Ten-Year Plan makes specific recommendations in this area. Actually, in spite of the fact that countries have made great efforts in the past two decades to improve data production, the information systems required to provide the decision-making processes with appropriate guidance are either nonexistent or show deficiencies in their coverage, in their reliability and, particularly, in their timing with reference to the administrative process, so that they cannot provide the appropriate input at the evaluation and control stages, and in the decision-making process generally. Certainly, it cannot be guaranteed that the deficiencies in such processes are due to lack of information, since decisions must be taken irrespective of whether information is available or not; it is rather evident that the programming of administrative evaluation and control processes has been defective, by failing appropriately to include the operation of its own mechanisms for the production of information suitable for purposes of specific use.

In addition to the immediate end of being used for purposes of administrative control, information has uses of a different nature in a health system. Duly compiled, stored and processed, it becomes a source of substantive knowledge which nourishes theory and methodology, adding to the understanding of the system. It is readily noticeable that the information systems of the various countries show relatively low levels of development in this respect, if one considers, for example, that the surveillance systems and epidemiologic intelligence are deficient, as are also the research programs generally and the operational research programs specifically.

5.1 Organization of an information system

Following the recommendations of the Ten-Year Plan, many countries are emphasizing the development of their information systems. Fifteen countries (over 2 out of every 3) have set themselves national goals for the organization and operation of such systems. Twelve countries (over one-half) state that they have an organized information system; it is in operation in nine of them. All the remaining countries but two have projects to organize such systems. This situation, which might be very encouraging, must be assessed conservatively, because it is obvious that the countries' replies do not contain information concerning their concept of a system of this nature, nor concerning its efficiency, productivity, etc. Their replies can only be regarded as a sign of the interest aroused in this field.

5.2 Coverage of the system

The political-administrative coverage of the systems in operation is nationwide in one-half of the countries; it is only partial in five and mixed in three (certain information covers the entire country and some only a part of it). In almost one-half of the countries, the system covers all the institutions in the health sector; in five countries, it covers only some institutions, and in four the coverage is mixed (certain information covers the entire sector and other information only some institutions). Finally, in over one-half of the countries, the system covers information concerning all health programs, while in the remaining countries it only covers some programs.

5. INFORMATION SYSTEMS (continued)

	5.3 Coordination of information systems									5.4 Establishment of information units				
	Intersectoral			Interinstitutional			Between program areas			At the sectoral level	At the institutional level			At the program level
	Yes	Partial	No	Yes	Partial	No	Yes	Partial	No		Ministry of Health	Social Security	Other	
Barbados		x			x			x		x				x
Bolivia														
Brazil	x			x			x			x				
Canada		x			x			x		x				x
Colombia	x			x			x			x				
Costa Rica		x			x			x		x	x	x	x	
Chile		x		x			x			x				
Ecuador	x			x			x			x				
El Salvador		x		x			x			x	x			
United States		x			x			x						
Guatemala		x			x			x			x			
Guyana		x			x			x		x				
Honduras							x				x			
Jamaica	x					x			x	x				
Mexico		x			x			x			x	x		
Nicaragua											x	x	x	
Panama		x			x			x			x	x		
Paraguay		x			x						x			
Peru		x			x			x			x			
Dom. Republic			x		x			x			x			
Trinidad-Tobago	x			x			x			x				
Venezuela		x			x			x			x			

5.3 Coordination of information systems

The information systems often show overlapping or gaps that limit their effectiveness and that can be remedied or eliminated by a proper coordination among them, facilitating the linking of the various stages of collection, transmission, production, storage, etc. In the opinion of 14 countries (almost 3 out of 4), coordination among the systems of different sectors is only partial or nonexistent. This situation constitutes a serious deficiency, especially if one considers the amount of information required by the sector for planning which is common to the various sectors involved in development: demographic, economic, social, environmental information, etc., of which the Health Sector is a user and in part a producer.

Equally undesirable is the situation concerning coordination among the information systems of the institutions belonging to the Health Sector. In this case, 13 countries (again 3 out of 4) consider such coordination to be only partial or nonexistent. In view of the type of "coordinated" health system prevailing in most countries in the Region, it will be necessary to make much greater efforts to promote shared information systems in certain areas and coordinated systems in others.

Finally, 12 countries (over 3 out of every 5) consider coordination among the information systems of health programs to be only partial or nonexistent, which is a sign of the inefficiency of programming itself, as well as of the persistence within the health systems of a certain vertical structure or isolationist tendency in some programs.

5.4 Establishment of information units

One-half of the countries (11) have or expect to establish information units operating at the sectoral level. Again in one-half of the countries there are or would be established units at the institutional level, within the health ministries. Only four countries mention the existence or their intention to establish information units within Social Security.

5. INFORMATION SYSTEMS (continued)

	5.5 Areas of information covered by the system																					
	5.5.I Human resources												5.5.2 Material resources									
	Availability				Training				Utilization				Availability				Formation				Utilization			
	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected
Barbados		x				x				x				x				x				x		
Bolivia																								
Brazil			x				x				x							x					x	
Canada				x				x				x			x				x					x
Colombia		x				x				x				x				x				x		
Costa Rica	x				x				x				x				x				x			
Chile			x			x				x					x			x					x	
Ecuador		x					x				x							x				x		
El Salvador		x										x												
United States	x				x				x							x					x			
Guatemala			x			x				x								x					x	
Guyana		x			x				x				x					x				x		
Honduras												x										x		
Jamaica			x			x				x									x			x		
Mexico		x				x				x									x			x		
Nicaragua			x			x				x					x				x				x	
Panama	x					x				x					x			x					x	
Paraguay																								
Peru			x			x				x					x				x				x	
Dom. Republic		x			x					x					x				x				x	
Trinidad-Tobago			x			x				x					x				x				x	
Venezuela			x	x				x				x				x				x				

5.5 Areas of information covered by the system

5.5.1 Human resources

The areas of information concerning the availability and utilization of human resources is being organized, or its organization is envisaged as a national goal for the decade, in 15 countries (almost 4 out of 5). Only five countries state that this area of information is organized and in operation.

A similar situation obtains with respect to the training of human resources. This is an area of information which is stated to be organized and in operation in only four countries, while 13 countries (over 3 out of every 5) envisage its organization as a national goal for the decade, or are in the process of organizing it.

5.5.2 Material resources

Five countries (1 out of 4) have organized and have in operation the area of information concerning the availability of material resources, while 14 other countries (almost 3 out of 4) are organizing it or envisage its organization as a national goal.

In the areas of both formation and utilization of material resources, the information is being organized or is envisaged as a national goal in 15 countries (almost 4 out of 5), and only three countries state that those areas are in operation.

5. INFORMATION SYSTEMS (continued)

	5.5 Areas of information covered by the system (continued)																											
	5.5.3 Financial resources								5.5.4 Production of services				5.5.5 Epidemiologic surveillance				5.5.6 Environmental sanitation				5.5.7 Programming and admins. control			
	Availability				Utilization																			
	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected
Barbados	x				x								x				x					x		
Bolivia																								
Brazil			x				x		x					x			x						x	
Canada				x				x				x				x				x				x
Colombia		x				x				x				x				x				x		
Costa Rica	x				x				x					x			x				x			
Chile									x				x				x					x		
Ecuador			x				x		x					x				x					x	
El Salvador		x							x				x				x					x		
United States	x				x				x				x				x				x			
Guatemala	x				x					x			x				x					x		
Guyana	x				x				x					x			x				x	x		
Honduras						x				x			x					x				x		
Jamaica	x					x			x				x				x						x	
Mexico		x				x			x				x				x					x		
Nicaragua			x				x				x				x			x				x		
Panama	x					x			x				x				x				x			
Paraguay									x				x				x							
Peru	x				x					x				x					x				x	
Dom. Republic		x					x		x					x				x					x	
Trinidad-Tobago		x				x			x				x					x				x		
Venezuela	x				x				x				x				x				x			

5.5.3 Financial resources

The area of information concerning the availability of financial resources is organized and in operation in one-half of the countries (9 out of 18 which replied); in the remainder, with one exception, in which this has not been envisaged, the area is being organized or its operation is envisaged as a national goal.

On the other hand, only seven of the 18 countries report that they have in operation the area of information concerning the utilization of financial resources. All the other countries but one, which did not envisage this, are organizing it or envisage its organization.

5.5.4 Production of services

The area of information concerning the production of services is in operation in seven out of every 10 countries, and in the remainder, with one exception in which this was not envisaged, it is being organized or its organization is envisaged.

5.5.5 Epidemiologic surveillance

The information concerning epidemiologic surveillance is organized and in operation in 12 countries (almost 3 out of 5) and is being organized or its organization is envisaged in another eight (2 out of 5).

5.5.6 Environmental sanitation

Thirteen countries (over 3 out of 5) have information systems in operation in the area of environmental sanitation, and the remainder, with one exception, are organizing them or envisage their organization.

5.5.7 Programming and administrative control

The area of information concerning programming and administrative control is being organized or its organization is envisaged in three out of four countries (of the 21 which reported). With the exception of one, which did not envisage it, this area of information is in operation in only five countries (1 out of every 4).

5. INFORMATION SYSTEMS (continued)

5.5 Areas of information covered by the system (continued)

5.5.8 Evaluation and control of specific programs

	Medical care			Maternal and child care			Nutrition			Immunization			Malaria			Tuberculosis		
	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected
Barbados					/1				/1				/1							
Bolivia																				
Brazil						x							x				x			
Canada				x				x				x				x				x
Colombia		x																		
Costa Rica																x				
Chile																			x	
Ecuador	x					x			x											
El Salvador																				
United States																				
Guatemala					x											x				
Guyana									x							x				
Honduras																x				
Jamaica						x				x										
Mexico													x				x			
Nicaragua			x				x								x					
Panama																				
Paraguay																				
Peru																				
Dom. Republic	x				x								x			x				
Trinidad-Tobago									x											
Venezuela	x				x												x			

/1 Status of the information system is not specified.

5.5.8 Evaluation and control of specific programs

On the basis of the few replies received, the area of program evaluation and control is one of the critical areas in the various countries. With the possible exception of the malaria eradication programs and of what can be glimpsed in the area of family planning, where they exist the programs that are most common and of the broadest scope do not have well-defined information systems for their evaluation and control, which amounts to saying that programming itself leaves much to be desired, since it does not include the essential mechanisms to assess impact, control activities and evaluate the fulfillment of objectives.

5. INFORMATION SYSTEMS (conclusion)

	5.5 Areas of information covered by the system (conclusion)															5.6 System of regular and phased reports for the control of care unit activities			5.7 Use of electronic computer resources for data processing		
	5.5.8 Evaluation and control of specific programs (conclusion)												5.5.9 Other areas								
	Cancer				Family planning				Other programs												
	In operation	In process of organization	National goal	Not projected	In operation	In process of organization	National goal	Not projected	In operation	Not projected	In process of organization	Not projected	In operation	In process of organization	National goal	Not projected	Exists	Non-existent	Planned	In operation	Non-existent	Planned
Barbados					/1												X				X	
Bolivia																		X				
Brazil		X																	X			X
Canada				X			X				X				X			X			X	
Colombia									X				X						X			X
Costa Rica					X				X								X					X
Chile			X							X				X			X					X
Ecuador																	X					X
El Salvador									X								X			X		
United States																	X			X		
Guatemala					X								X									
Guyana									X									X				X
Honduras					X														X			X
Jamaica						X											X				X	
Mexico	X								X	X							X					X
Nicaragua							X				X						X				X	
Panama																	X					X
Paraguay																	X					
Peru										X							X			X		
Dom. Republic																			X			X
Trinidad-Tobago				X													X				X	
Venezuela	X								X				X				X					X

/1 Status of the information system is not specified.

5.6 Reporting systems

The control of the activities performed by the health care units is carried out on the basis of the information collected by means of a system of regular and phased reports. The reports must include the goals set for such activities and the results obtained, a comparison and explanation of which for each of the different phases provides the control authorities with the information required for deciding on corrective measures.

Such a system is in operation in 14 out of the 21 countries which reported (2 out of 3). The system does not exist and is not envisaged in only three countries, while its organization is envisaged in the remaining four countries.

5.7 Use of electronic computer resources

The use of electronic computers for data processing in the national information systems is still very limited, although it is gaining strength as a means for the development and improvement of such systems. Out of the 21 countries which replied, only three (1 out of 7) use electronic computers for data processing, and their use is envisaged in 11 (somewhat over one-half). It can be expected that this field will be considerably developed in the next few years, and that by the end of the decade the information systems of over two-thirds of the countries will have access to electronic computers.

6. HEALTH STATISTICS

VITAL STATISTICS

	System for the registration, collection processing and analysis of data			Availability of data (last year)		Quality of information				Utilization		
	Adequate	Deficient	Plans for improvement	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not) been evaluated	Broad	Restricted	Slight
Barbados	x		1976-80	1972	1973	x				x		
Bolivia		x	1975		1969				x		x	
Brazil		x	1976	1973	1974				x		x	
Canada	x			1973	1974	x				x		
Colombia		x	1976-80		1972			x			x	
Costa Rica	x			1973	1974	x						
Chile	x			1973	1974	x				x		
Ecuador	x			1973		x				x		
El Salvador		x		1972	1973	x				x		
United States	x		continues	1974	1975	x				x		
Guatemala		x	1976	1972	1974			x		x		
Guyana		x	1975	1967		x				x		
Honduras		x	s/	1973	1973			x		x		
Jamaica		x		1974		x						x
Mexico	x			1972	1973	x				x		
Nicaragua		x	1977	1973	1973			x			x	
Panama												
Paraguay		x	s/	1974	1974		x			x		
Peru		x	1975-76	1972 /1		x /1				x /1		
Dom. Republic		x	1977		1974		x					x
Trinidad-Tobago	x			1972		x				x		
Venezuela	x		1975	1973		x					x	

/1 Deaths only

VITAL STATISTICS (conclusion)

	Reliability of vital statistics		Estimated underregistration				Source of information on underregistration				Percentage of deaths with medical certification	Plans to improve quality and coverage of vital statistics	
			BIRTHS		DEATHS		Sampling surveys	Other research	Based on census data	Other sources		Existent	Non-existent
	Known	Not known	%	Year	%	Year							
Barbados	x		0.5	1970	-	-			x		100	x	
Bolivia	x		..		70-75	1969				x	..	x	
Brazil	x		..		..				x		..	x	
Canada	x		0	1974	0	1974		x			100		
Colombia	x		..		30	..	x		x		60		
Costa Rica	x		7.2/1	1972	15.1/1	1962-63		x			72.4		
Chile	x		8.9	1973	..			x			78.6	..	..
Ecuador	x		14.6	1971	19.1	1971		x			45.1		
El Salvador	x		3.0	1971	40-45	1971			x		36.3	x	
United States	x		1	1975	1	1975	x				-		
Guatemala		x	..		..						27		
Guyana		x									95		
Honduras	x		9.0	1971-72	43.7	1971-72	x				13	..	..
Jamaica		x										x	
Mexico		x									75	x/3	
Nicaragua		x									/4	x	
Panama													
Paraguay	x		67	1973	50	1974				x	36.2	x	
Peru	x		25	1940-61	42	1940-61		x			56	x	
Dom. Republic	x		8.6	1969	35.8	1969				x	45.5	x	
Trinidad-Tobago		x										x	
Venezuela	x				5.9	1971		x			78	x	

/1 Delayed registration /2 Registration systems have clearly improved as of the date.
/3 Change in the system /4 There are no medical certificates.

6. HEALTH STATISTICS

VITAL STATISTICS

In spite of the enormous importance of the health indicators which are derived from the vital statistics gathered for the purpose of evaluating and studying the trends assumed by health conditions in the various countries, this area of health statistics has been the one that has progressed the least during the last 20 years.

In most countries, the system depends on other agencies or institutions outside of the Health Sector, such as the civil register and the national statistical institutes, for registration and collection of vital statistics.

The Health Sector has promoted the improvement of this system in spite of its limitations. All of the 22 countries of the Region that filled out the questionnaire reported that they had some system for recording, collecting, processing and analyzing data. Many of the Latin American countries (12 of them, containing 65% of the total population) indicate that this system is still deficient.

Planning and evaluation activities for health programs, as well as the increasing demand for information on births and deaths by economic and social sectors, are forcing the various countries to revise their registration, collection, processing and analysis systems. Some countries have proceeded to collect this information by means of population polls based on sampling. Others are conducting studies on partial registration in order to improve the civil registration systems. Still others are studying estimates of vital statistics through analysis of population censuses. Ten countries report that they will proceed to improve this system between 1975 and 1980.

The availability of these data in widely circulated publications constitutes a more objective indication of the use being made of this information. Of the 22 countries that have submitted reports, three have supplied the information for 1974, nine for 1973, and six for 1972. Six other countries have submitted information for 1974, three for 1973, and one for 1972, although this information is restricted to tabulations for internal use. In the case of the countries, an adequate analysis of this information is lacking, and its actual use is very limited.

Eight countries admit that the quality of information supplied is not yet adequate. Fourteen of the 22 countries have some knowledge of the soundness of their vital statistics. With regard to births, eight countries have indicated partial registration of less than 10%, two between 10% and 25%, and one of more than 60%.

The situation is much worse in the case of deaths. Estimates are available of the partial registrations obtained by 13 countries. Of these, four report having partial registration of less than 10%, two between 10% and 20%, and the remaining seven countries higher than 30%. (Two countries indicate partial registration of 50% or more.)

Another factor that contributes to the quality of the information is the percentage of deaths reported by means of medical certificates. Of the 17 countries for which information is available, six report that less than 50% of the deaths are covered by medical certification (one country has only 27%, another only 13%), seven have between 50% and 80%, and only four countries have more than 95% covered by medical certification. This information is not available for the remaining four countries.

6. HEALTH STATISTICS (continued)

COMMUNICABLE DISEASES

	System for the registration, collection, processing and analysis of data				Coverage				Availability of data		Quality of the information			Utilization		
					Public sector only				Last year							
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados	x			1976-80	x				1973	1974	x				x		
Bolivia		x		1975			x		1970	1974		x				x	
Brazil		x		1976	x				1971	1973			x			x	
Canada		x		-	x				1975	1975		x			x		
Colombia				1975-77	x					1974			x			x	
Costa Rica		x			x				1973	1974	x				x		
Chile	x					x			1973	1974	x				x		
Ecuador		x		1975-76	x				1975			x				x	
El Salvador	x						x		1974	1975	x					x	
United States										1974	x				x		
Guatemala	x			1976			x										
Guyana		x					x			1974		x				x	
Honduras	x							x	1973	1974	x				x		
Jamaica		x			x					1974			x				x
Mexico		x			x				1974	1974		x			x		
Nicaragua		x		1977				x									
Panama									1973	1974		x			x		
Paraguay		x		Yes	x				1971		x				x		
Peru		x		1975-76			x			1974		x				x	
Dom. Republic		x		1977			x			1974		x				x	
Trinidad-Tobago		x		1975				x		1974		x				x	
Venezuela		x					x		1973				x				x

COMMUNICABLE DISEASES

Every country has some system for recording, collecting, processing and analyzing data. Of the 22 countries that answered the questionnaire, seven report that the system in this area of statistics is adequate and 15 indicate that the system is deficient (14 Latin American countries with 90.6% of the population).

The control or eradication campaigns for some diseases and the epidemiologic surveillance activities have greatly contributed to the improvement of reporting, analysis and utilization of information concerning communicable diseases. Due to the existence of many autonomous or semiautonomous public health agencies, the coverage of health statistics in many countries is reduced to the cases diagnosed in health institutions which are controlled by the Ministry of Health. In many cases, even within the Ministry of Health itself, information is given only for large institutions or, due to omission of reports concerning activities of some health institutions, the cases taken care of by the latter are not included in the national statistics. Of the 22 countries for which information is available, five indicate that its coverage is limited to the Ministry of Health alone while five others indicate that the information partially covers some other public agencies. In most of the countries, cases diagnosed by private physicians are rarely included in the statistics for communicable diseases.

There exist more publications or information in this area of health statistics than in any other. Four of the 22 countries indicate that they have publications containing data for the last year (1974) and another 13 indicate that this information is available in tabulations for internal use.

Only seven countries report that the quality of information is adequate. In many cases, the quality is affected by the limitations or shortage of professional personnel and laboratory services for performing the diagnosis. In many cases, this information is furnished by auxiliary personnel.

6. HEALTH STATISTICS (continued)

MORBIDITY OF HOSPITALIZED PATIENTS

	System for the registration, collection, processing and analysis of data				Coverage			Availability of data		Quality of the information				Utilization	
						Public sector only		Last year							
	Adequate	Deficient	Non-existent	Plans for improving it	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados	x		1976-80				x	1973	1974				x		x		
Bolivia		x	1975				x	1970	1973		x				x		
Brazil		x	1976					1973	1974				x		x		
Canada		x	-					1971	1973	x				x			
Colombia		x	1975-77	x					1973		x				x		
Costa Rica		x	1975-80				x	1972	1972	x				x			
Chile		x			x			1969	1970	x				x			
Ecuador	x		1976					1973		x				x			
El Salvador		x					x		1971	x							x
United States																	
Guatemala	x		1976			x		1974			x			x			
Guyana		x	1975			x			1973		x				x		
Honduras		x					x	1973	1974	x				x			
Jamaica		x		x				1974				x					x
Mexico	x			x				-	-			x		x			
Nicaragua		x	1977				x	1974	1974	x				x			
Panama																	
Paraguay		x	Yes	x				1973	1974	x				x			
Peru		x	1975-76	x				1965	1972	x					x		
Dom. Republic		x	1977			x			1974		x						x
Trinidad-Tobago		x					x		1973		x				x		
Venezuela			x 1977				x	1973		x					x		

MORBIDITY OF HOSPITALIZED PATIENTS

Although, in all countries, information concerning diagnosis of the patient is recorded in clinical histories, only 11 countries of the 22 that have reported indicate having a system for processing and analyzing this information.

Eight countries indicate that coverage is limited solely to the Ministry of Health. The other countries indicate various degrees of coverage within the public sector and six countries indicate a theoretical national coverage, that is, they include the private sector. Nevertheless, no indication is made of the degree of reliability with which this information is collected. For this purpose, one country employs the system of permanent polls that permits obtaining good estimates of morbidity and performing specific analyses concerning the most relevant aspects of the health services with a great deal of flexibility in the employment of data by the national government and in the evaluation of these health institutions.

A severe hindrance to the convenient obtaining of these data in many countries is the heavy overload that these data produce in the data processing systems. The latter, in turn, hinders adequate analysis of the data, which generally do not satisfy the data requirements for administration or evaluation of these health institutions.

6. HEALTH STATISTICS (continued)

MORBIDITY OF AMBULATORY PATIENTS

	System for the registration, collection, processing and analysis of data				Coverage				Availability of data		Quality of the information			Utilization	
					Public sector only				Last year						
	Adequate	Deficient	Non-existent	Plans for improving it	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados	x		1976-80			x			1973	1974	x					x	
Bolivia		x	1975				x		1970	1973		x				x	
Brazil		x	-			x			1973	1974				x		x	
Canada	x				x				-	-							
Colombia		x	1975-77		x					1973			x			x	
Costa Rica	x				x				-	-				x			
Chile	x									1974		x			x		
Ecuador		x			x				1975		x					x	
El Salvador		x					x			1971	x						x
United States																	
Guatemala	x		1976			x				1974		x			x		
Guyana		x	1975			x				1973		x				x	
Honduras	x				x				1973	1974			x		x		
Jamaica		x			x					1974			x				x
Mexico	x					x				1974			x			x	
Nicaragua		x	1977			x			1973	1973		x				x	
Panama																	
Paraguay	x		Yes			x			1973	1974		x			x		
Peru		x	1975-76		x				1964							x	
Dom. Republic		x	1977			x				1973			x			x	
Trinidad-Tobago		x	1975				x			1973		x				x	
Venezuela	x		1975			x											

MORBIDITY OF AMBULATORY PATIENTS

Most countries have systems for recording this information within health institutions, either on cards or in clinical histories. Due to the enormous volume of this information and to failure to specify the diagnoses, very few countries have systems for collecting or processing these data. Some countries have a regular program for collecting this information through periodic or systematic sampling. Only four countries indicate that this system of data collection, processing and analysis is adequate.

Coverage of this information is very restricted. Even within the Ministry of Health, it is limited solely to the principal institutions or to certain clinics. Fifteen countries indicate having data available, six in publications and nine in tabulations for internal use.

In general, these tabulations (when they do exist) contain very few details, do not refer to the people served by the institution or to the facilities employed and do not satisfy the informational requirements of the health services. Three countries report that the quality of these data is adequate, and only four indicate that extensive use of these is made.

There is an urgent need for conducting a study to determine the type of information to be collected as well as its details and frequency of collection.

6. HEALTH STATISTICS (continued)

HUMAN RESOURCES

	System for the registration, collection, processing and analysis of data					Coverage			Availability of data		Quality of the information				Utilization	
						Public sector only			Last year							
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for inter. use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados		x		1976-80	x				1973	1974	x				x		
Bolivia			x	1975									x				
Brazil		x		1976													
Canada		x		1978	x				1973	1974		x			x		
Colombia			x	1975-77					-	-							
Costa Rica		x		1975-80	x				1977	1974	x				x		
Chile		x			x					1974		x			x		
Ecuador			x	1975						1975/1			x				
El Salvador			x					x	1974	1975							
United States																	
Guatemala		x		1976				x	1974								
Guyana		x					x			1972		x				x	
Honduras		x		Yes				x	1973	1974							
Jamaica			x	1976	x				-	-							
Mexico		x			x					1974		x					
Nicaragua		x		1977													
Panama																	
Paraguay			x	Yes													
Peru		x		1975-76				x	1974								
Dom. Republic		x		1977													
Trinidad-Tobago		x						x		1973		x					
Venezuela		x		1977				x	1973								

/1 Census of Health Resources

HUMAN RESOURCES

Serious problems exist in the recording and collection of this information. No country indicates having an adequate system of manpower statistics. Six countries do not have a specially designed system for the collection of this information. Some countries add up the jobs which are budgeted for the various institutions or agencies of the public health sector with the consequent duplication or multiplication of the number of professionals at national level. Other countries employ the official professional rosters or the professional society rosters which are generally not up to date. (The names of professionals who die, stop practising or leave the country are not eliminated from these rosters.) Furthermore, this type of roster exists only for professional personnel. There are none for auxiliary personnel.

No country has a system of periodic polling or registration at national level. Coverage of the few systems that do exist in Latin America includes only the Ministry of Health and some agencies belonging to the public sector. Seven countries report that coverage of information is complete. Thirteen countries indicate that health manpower information is available, nine of these in publications and four in tabulations for internal use. Only two countries indicate that this information is adequate and five indicate that this information is used extensively.

6. HEALTH STATISTICS (continued)

INSTITUTIONS

	System for the registration, collection, processing and analysis of data				Coverage			Availability of data		Quality of the information				Utilization		
						Public sector only			Last year							
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados		x		1976-80													
Bolivia		x		1975				x		1975		x			x		
Brazil		x		1976	x				1971	1973	x				x		
Canada		x		1978	x				1975	1975		x			x		
Colombia			x	1975-77	x					1974	x				x		
Costa Rica	x				x				1973	1974	x				x		
Chile	x				x					1974		x			x		
Ecuador		x		1975					-	1975/1				x			
El Salvador		x						x	1975			x				x	
United States																	
Guatemala		x		1976			x			1974	x					x	
Guyana	x					x				1974		x				x	
Honduras		x		Yes	x				1973	1974		x			x		
Jamaica		x			x				-	-				x			
Mexico	x				x					1975		x	x		x		
Nicaragua		x	1977			x			1973	1973		x				x	
Panama																	
Paraguay			x														
Peru		x		1975-76	x				1972/2	1974/1	x/2					x/2	
Dom. Republic		x		1977			x			1974		x					
Trinidad-Tobago		x						x		1974		x				x	
Venezuela	x				x				1973		x						x

/1 Census of Health Resources /2 Establishments of the Ministry of Health only

INSTITUTIONS

The information that is collected concerning hospitals and hospital beds is more reliable than the information dealing with other health resources in most Latin American countries. In general, the coverage for this hospital information is national. On the other hand, this is not so for the information concerning other health institutions.

Only three countries indicate that they did not have a system for recording and collection of information concerning health institutions. Eight countries indicate that the system is adequate. Of the 13 countries that indicate having a deficient system, nine state that they have plans for improving the system. One country intends to introduce a system during the period between 1975 and 1980.

Twelve countries indicate that the information coverage is national, that is, it includes both the public and private sectors. Nineteen countries indicate having this information for the 1973-1974 year in publications (6) or in tabulations for internal use. Only one country indicates that information concerning these data is of an insdequate quality. Another two indicate that they are unfamiliar with its quality. Nine countries indicate that extensive use is being made of this information.

6. HEALTH STATISTICS (continued)

	SERVICES AND HOSPITAL CARE																
	System for the registration, collection, processing and analysis of data				Coverage				Availability of data		Quality of the information				Utilization		
					Public sector only				Last year								
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados	x			1976-80				x	1973	1974	x					x	
Bolivia		x		1975				x		1974		x				x	
Brazil		x		1976	x				1971	1973			x				x
Canada	x				x				1973	1975	x				x		
Colombia		x		1975-77		x				1974		x				x	
Costa Rica	x				x				1973	1974	x				x		
Chile	x					x			1973	1974	x				x		
Ecuador	x								1975		x			x			
El Salvador	x							x	1974			x				x	
United States																	
Guatemala	x			1976			x		1974			x			x		
Guyana		x		1975			x			1973		x				x	
Honduras		x		Yes	x				1973	1974			x		x		
Jamaica		x			x				1974				x				x
Mexico		x			x					1970			x		x		
Nicaragua		x		1977			x		1974	1974		x			x		
Panama																	
Paraguay	x							x	1973	1974		x			x		
Peru		x		1975-76	x					1974		x				x	
Dom. Republic		x		1980			x			1974		x					
Trinidad-Tobago		x						x		1973		x				x	
Venezuela		x						x									

SERVICES AND HOSPITAL CARE

Every country has some information system concerning the services and care offered by the hospitals. These reports are generally requested by the national government for the annual report of the institution's activities. In a very few countries, this statistical system provides adequately for the informational requirements of the institution's administration or for the planning and evaluation of the regional or national health system. Ten countries indicate that this system is adequate with respect to recording, collection, processing or analysis of this information. Of the 12 countries which indicate that this system is deficient, eight have plans to improve it within the next five years.

Coverage is limited to the Ministry of Public Health in seven countries and includes parts of other agencies of the public sector in another five countries. Two countries indicate having total coverage of the public sector and another eight report that they have total coverage including the private sector. With regard to availability of data in publications or tabulations for internal use, 20 of the 22 countries report that the data are available for one of the last two years (1973 or 1974). Nevertheless, there is no indication whether these publications summarize the national situation or are publications of individual institutions or agencies. Five countries indicate that the quality of the information is adequate.

6. HEALTH STATISTICS (continued)

	SERVICES AND CARE IN OTHER INSTITUTIONS (without hospitalization)														
	System for the registration, collection, processing and analysis of data				Coverage			Availability of data		Quality of the information				Utilization	
					Public sector only			Last year							
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for inter. use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados			1976-80					1973	1974	x						
Bolivia		x	1976				x	1973		x					x	
Brazil		x	1976	x				1971	1973			x				x
Canada		x	1978	x				-	1974		x				x	
Colombia		x	1975-77		x				-							
Costa Rica		x	1975-80				x	1973	1974		x			x		
Chile	x				x			1973	1974	x					x	
Ecuador	x							1974		x	x				x	
El Salvador	x						x	1974								
United States																
Guatemala	x								1974		x			x		
Guyana		x	1975			x			1973		x				x	
Honduras		x	Yes				x	1973	1974			x		x		
Jamaica			x					-	-				x			
Mexico									1970			x		x		
Nicaragua		x	1977			x										
Panama																
Paraguay		x														
Peru		x	1975-76				x		1974		x				x	
Dom. Republic		x	1980			x										
Trinidad-Tobago																
Venezuela			x													

SERVICES AND CARE IN OTHER INSTITUTIONS (NOT HOSPITALS)

Every country has some recording and collection system for services and care in outpatient institutions. This information is very frequently used in annual reports of the work done by the national government and the health institutions. Nevertheless, this information rarely meets the requirements for administration and evaluation of these institutions or the national health system. It is generally fragmentary, being limited to agencies and institutions of the health sector and, due to lack of standardization of recording and processing of this information, it is almost impossible to make it compatible at national level. Frequently, the information is not related to the towns serviced nor the resources employed. Four countries indicate that this system is adequate. Ten of the other countries indicate that there exist plans for improving the system within the next five years.

Twelve countries report having data available for one of the last two years in publications (7) or in tabulations for internal use. The lists and contents of these publications vary greatly. Only four countries indicate that the quality of information is adequate and four report that extensive use is made of the data.

6. HEALTH STATISTICS (continued)

	ENVIRONMENTAL HEALTH															
	System for the registration, collection, processing and analysis of data				Coverage			Availability of data		Quality of the information					Utilization	
					Public sector only			Last year								
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados		x		1976-80	x				1973	1974	x					x	
Bolivia			x	1976										x			
Brazil		x		1976	x				1970	1972	x				x		
Canada		x		1978			x			1975						x	
Colombia		x		1975-77		x				1974		x			x		
Costa Rica		x		1975-80				x	1973	1974	x					x	
Chile	x					x			1973	1973			x			x	
Ecuador		x		1976				x	1974				x				x
El Salvador	x							x	1974			x				x	
United States																	
Guatemala		x		1976				x						x	x		
Guyana	x						x			1973		x				x	
Honduras		x						x	1973	1974			x		x		
Jamaica		x			x				1973				x			x	
Mexico		x					x			1970		x			x		
Nicaragua		x		1977				x	1974				x			x	
Panama																	
Paraguay	x							x	1973	1974	x				x		
Peru			x	1975-76													
Dom. Republic		x		1977			x			1974		x				x	
Trinidad-Tobago																	
Venezuela																	

ENVIRONMENTAL HEALTH

Information concerning this area is meager and fragmentary. Environmental health activities are scattered among a large number of government agencies. Depending on the size of the population center, public water supply and sewerage systems may be the responsibility of the health services, the Ministry of Public Works, the Ministry of Water Resources, the municipalities, the state or provincial governments or free enterprise. Each of these probably has its own information system.

Other environmental health activities are also found scattered among the health services or the national government's services (collection and disposal of solid wastes; pollution of water, air and soil; control of noise and other stresses).

Four countries indicate that the system for recording and collection of information in this area is adequate without indicating the contents of this system. Only three countries indicate that coverage of this information is national in scope. Thirteen countries indicate that they have data for one of the last two years, either in publications (9) or in tabulations for internal use. Nevertheless, they do not indicate whether these publications refer only to an activity within this area or include only a civil service agency. Four countries indicate that the quality of information is adequate and six report that extensive use is made of this information.

6. HEALTH STATISTICS (continued)

INVESTMENTS IN HEALTH

	System for the registration, collection, processing and analysis of data				Coverage			Availability of data		Quality of the information			Utilization		
					Public sector only			Last year							
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados		x		1976-80			x				x				x		
Bolivia			x	-										x			
Brazil			x	-													
Canada	x				x			1974	1974	x				x			
Colombia			x	1975-77		x											
Costa Rica		x		1975-80			x	1973	1974								
Chile			x					-	-		x						
Ecuador		x		1976			x	1974					x				
El Salvador	x						x	1974		x					x		
United States																	
Guatemala		x		-			x	..	..					x	x		
Guyana		x				x											
Honduras		x		Yes			x	1973	1974		x				x		
Jamaica			x					-	-					x			
Mexico		x				x			1974	x				x			
Nicaragua	x					x		1974			x					x	
Panama																	
Paraguay																	
Peru			x														
Dom. Republic									1974			x					x
Trinidad-Tobago		x					x		1973	x					x		
Venezuela																	

MANAGEMENT STATISTICS

	System for the registration, collection, processing and analysis of data				Coverage			Availability of data		Quality of the information			Utilization		
					Public sector only			Last year							
	Adequate	Deficient	Non-existent	Plans for improving it (year)	Entire health sector	Complete	Partial	Ministry of Health only	In official publication	Tabulated for internal use	Adequate	Acceptable only in some important categories	Deficient	Unknown (has not been evaluated)	Broad	Restricted	Slight
Barbados				1976-80													
Bolivia			x	1976										x			
Brazil			x	-													
Canada			x					-	-								
Colombia			x	1975-77		x											
Costa Rica		x		1975-80			x	1973	1974					x		x	
Chile			x					-	-		x						
Ecuador		x		1976			x	1974					x				
El Salvador	x						x	1974		x					x		
United States																	
Guatemala			x														
Guyana																	
Honduras		x		Yes			x	not tabulated									
Jamaica		x			x			-	-				x				
Mexico		x				x			1974	x				x			
Nicaragua		x		1977		x		1974					x			x	
Panama																	
Paraguay																	
Peru			x														
Dom. Republic		x		1977		x											
Trinidad-Tobago			x														
Venezuela																	

6. HEALTH STATISTICS (continued)

	DATA PROCESSING EQUIPMENT													
	Ministry of Health as adequate data processing equipment for health statistics					There is sufficient quantity of trained personnel for optimum utilization of equipment				Sufficient calculating machines for analysis of data		Plans exist for improvement to equipment in 1975-1980	
			TYPE		No equipment available			Training plans exist					
	Yes	No	Electronic computers	Electro-mechanical		Yes	No	Yes	No	Yes	No	Yes	No
Barbados		x		x			x				x		
Bolivia		x			x						x	x	
Brazil	x		x /1									x	
Canada	x		x			x				x		x	
Colombia		x			x					x			
Costa Rica	x			x			x			x		x	
Chile	x			x		x				x		..	..
Ecuador		x			x					x		x	
El Salvador		x		x							x	x	
United States	x		x			x				x			
Guatemala		x		x			x				x	..	..
Guyana		x		x			x				x	..	..
Honduras		x /1		x		x				x			x
Jamaica	x			x			x			x			
Mexico	x		x	x			x				x		
Nicaragua		x			x						x	x	
Panama													
Paraguay		x		x			x	x					x
Peru		x		x		x		x			x	x	
Dom. Republic	..	..		x						x			x
Trinidad-Tobago		x		x			x	x			x	x	
Venezuela		x		x		x		x		x		x /2	

/1 Access to electronic computers of others

/2 Contract for electronic computer projected for 1975

INVESTMENTS IN HEALTH AND MANAGEMENT STATISTICS

In most countries, there are still no reliable statistical systems with national coverage concerning investments in health and management statistics.

It has been necessary to make an analysis of health problems and requirements, to evaluate existing health programs and to determine suitable priorities in order to distribute the limited health resources in such a manner as to utilize them as efficiently as possible. For this purpose, it will be necessary to obtain information concerning program budgets and costs in the health sector as soon as possible so as to be able to justify these investments with respect to the magnitude of the problems, the work involved and the effect produced on the community or region.

Some countries have begun routine recording and collection of this information within the health services. Others are conducting special polls or studies to obtain this information.

DATA PROCESSING EQUIPMENT

One of the severest handicaps to statistical units has been the lack or scarcity of data processing equipment. Large volumes of data remain unprocessed for long periods. When they are finally processed, it is generally too late for them to be of any use.

Eight of the 22 countries which answered the questionnaire indicate that there exists adequate equipment within the Ministry of Health for processing health statistics. Of these eight countries, three own an electronic computer and one has access to someone else's electronic computer. Of the remainder, 10 indicate having some kind of equipment which is, however, inadequate, and four indicate that they have absolutely no data processing equipment.

Six countries report that they have a sufficient number of trained personnel for maximum utilization of the equipment and four indicate that they have plans for training such personnel in the near future.

Only 10 countries of the 22 reporting said that they have a sufficient number of computing machines for analyzing the data.

Ten countries report that they have plans for providing their statistical and data services with the necessary processing and analysis equipment.

6. HEALTH STATISTICS (continued)

STATISTICAL PERSONNEL IN THE MINISTRY OF HEALTH

At the national level (central office)

	PROFESSIONAL						TECHNICAL						AUXILIARY					
	Year	Number employed	Quantity satisfactory		Number considered minimum required		Year	Number employed	Quantity satisfactory		Number considered minimum required		Year	Number employed	Quantity satisfactory		Number considered minimum required	
			Yes	No	Year	No.			Yes	No	Year	No.			Yes	No	Year	No.
Barbados	1974	-		x	1975	1	1974	1		x	1975	3						
Bolivia	1975	0		x	1980	3	1975	3			1980	5	1975	10			1980	10
Brazil	1975	11			1975	18	1975	6			1975	6						
Canada	1975	111					1975	85					1975	94				
Colombia	1975	8			1975	12	1975	4			1975	6	1975	8			1975	10
Costa Rica /1	1972	6			1980	14	1972	14			1980	29	1972	8			1980	395
Chile			x						x						x			
Ecuador	1974	1			1977	3	1974	4			1977	10	1974	10			1977	17
El Salvador	1975	1			1975	1	1975	4			1975	4	1975	5			1975	5
United States																		
Guatemala	1974				1980	2	1974	3			1980	6	1974	20			1980	30
Guyana	1974	0			1976	1	1974	0			1976	3	1974	1			1976	4
Honduras	1974				1980	1	1974	6			1980	7	1974	2			1980	5
Jamaica				x						x						x		
Mexico				x						x						x		
Nicaragua	1975	1			1980	2	1975	1			1980	5	1975	6			1980	9
Panama																		
Paraguay	1975				1976		1975	3			1976	6	1975	23			1976	23
Peru	1975	1			1975	3	1975	2			1975	5			x			
Dom. Republic	1974	2			1974	2	1974	3			1974	5	1974	9			1974	12
Trinidad-Tobago	1975	0			1975	0	1975	3			1975	6	1975	10			1975	19
Venezuela				x						x						x		

/1 Minimum number required estimated for all levels of the system.

STATISTICAL PERSONNEL IN THE MINISTRY OF HEALTH (continued)

At the regional level (district, province, etc.)

	PROFESSIONAL						TECHNICAL						AUXILIARY					
	Year	Number employed	Quantity satisfactory		Number considered minimum required		Year	Number employed	Quantity satisfactory		Number considered minimum required		Year	Number employed	Quantity satisfactory		Number considered minimum required	
			Yes	No	Year	No.			Yes	No	Year	No.			Yes	No	Year	No.
Barbados																		
Bolivia																		
Brazil																		
Canada	1975						1975	3					1975	3				
Colombia	1975	4			1975	10	1975	56			1975	60	1975	21			1975	100
Costa Rica		-						-						-				
Chile			x						x						x			
Ecuador	1974	0			1977	3	1974	17			1977	20	1974	36			1977	57
El Salvador							1975	1			1975	2	1975	1			1975	3
United States																		
Guatemala	1974	-			1980	-	1974			x	1980	22	1974			x	1980	44
Guyana	1974	0			1976	-	1974	0			1976	3	1974	2			1976	6
Honduras	1974				1980		1974	2			1980	7	1974	5			1980	7
Jamaica				x						x						x		
Mexico				x						x						x		
Nicaragua	1975	-			1980	-	1975	-			1980	3	1975	-			1980	3
Panama																		
Paraguay	1975				1976		1975	6			1976	8	1975	6			1976	12
Peru				x						x						x		
Dom. Republic	1974	-			1974	-	1974	4			1974	5	1974	9			1974	15
Trinidad-Tobago	1975	-			1975	-	1975	-			1975	-	1975	-			1975	-
Venezuela				x						x						x		

HEALTH STATISTICS PERSONNEL (MINISTRY OF HEALTH)

a) National level

One of the greatest obstacles to the development of health statistics in most Latin American countries is the lack of professional personnel who can organize and direct the system. There is a shortage of professional personnel in the fields of biostatistics, medical records and computers. Of the 22 countries that replied to the questionnaire, only one reports having a satisfactory number in this category.

The same situation exists with regard to technical personnel. Only one country indicates having a sufficient number of this type of professional.

As for auxiliary personnel, two countries indicate that they have a sufficient number at this level.

Without adequate equipment and qualified personnel, no system of health statistics can meet the demand and requirements of the health services. In private enterprise, a large percentage of the personnel is assigned to the duties of administration, surveillance and evaluation of operations, and a large portion of this budget is allocated to the data recording, collection and analysis system.

b) Regional level

The situation is the same here as at national level. Only one country indicates having sufficient professional, technical or auxiliary personnel at this level.

This personnel is indispensable at this level for the work of advising and supervising at the local level, and of performing the preliminary data tabulations so as to provide information to the lower and higher levels in an opportune fashion and of evaluating the region's activities.

6. HEALTH STATISTICS (continued)

STATISTICAL PERSONNEL IN THE MINISTRY OF HEALTH (continued)

At the local level, in hospitals of more than 100 beds

	PROFESSIONAL						TECHNICAL						AUXILIARY					
			Quantity satisfactory		Number considered minimum required				Quantity satisfactory		Number considered minimum required				Quantity satisfactory		Number considered minimum required	
	Year	Number employed	Yes	No	Year	N°	Year	Number employed	Yes	No	Year	N°	Year	Number employed	Yes	No	Year	N°
Barbados	1974	0		x	1975	1	1974	6										
Bolivia	1975	0			1980	0	1975	6			1980	16	1975	19			1980	50
Brazil																		
Canada	1975	0					1975	0					1975	0				
Colombia	1975	-			1975	-	1975	57			1975	200/1	1975	154			1975	300
Costa Rica							1975	29			1980		1975	64			1980	
Chile			x						x						x			
Ecuador	1974	-			1977	-	1974	4			1977	64	1974	144			1977	105
El Salvador	1975	-					1975	5			1975	14						
United States																		
Guatemala	1974			x	1980	2	1974	5		x	1980	25	1974	20		x	1980	100
Guyana	1974	0			1976	-	1974	0			1976	3	1974	1			1976	10
Honduras	1974	-			1980	1	1974	9			1980	18	1974	11			1980	58
Jamaica			x							x						x		
Mexico			x							x						x		
Nicaragua	1975	-			1980	-	1975	5			1980	18	1975	12			1980	60
Panama																		
Paraguay	1975				1976		1975	-			1976	2	1975	2			1976	2
Peru			x							x						x		
Dom. Republic	1974	-			1974	-	1974	5			1974	8	1974	12			1974	20
Trinidad-Tobago	1975	0			1975	0	1975	4			1975	6	1975	10			1975	19
Venezuela			x							x						x		

/1 Overall estimated number for all levels

STATISTICAL PERSONNEL IN THE MINISTRY OF HEALTH (conclusion)

At local level, in hospitals of less than 100 beds and other health establishments

	PROFESSIONAL						TECHNICAL						AUXILIARY					
			Quantity satisfactory		Number considered minimum required				Quantity satisfactory		Number considered minimum required				Quantity satisfactory		Number considered minimum required	
	Year	Number employed	Yes	No	Year	N°	Year	Number employed	Yes	No	Year	N°	Year	Number employed	Yes	No	Year	N°
Barbados							1974			x								
Bolivia							1975				1980	20	1975	30			1980	96
Brazil																		
Canada							1975	0					1975	0				
Colombia							1975	56			1975	60	1975	201			1975	700
Costa Rica							1975	5			1980	/1	1975	11			1980	/1
Chile									x						x			
Ecuador							1974	15			1977	49	1974	122			1977	196
El Salvador							1975	-			1975	8						
United States																		
Guatemala							1974	-		x	1980	11	1974	-		x	1980	44
Guyana							1974	-			1976	-	1974	-			1976	11
Honduras							1974	-			1980	-	1974	4			1980	30
Jamaica										x						x		
Mexico										x						x		
Nicaragua							1975	-			1980	-	1975	50			1980	100
Panama																		
Paraguay							1975	-			1976	-	1975	150			1976	
Peru										x						x		
Dom. Republic							1974			x			1974			x		
Trinidad-Tobago							1975	1			1975	2	1975	0			1975	0
Venezuela										x						x		

/1 Overall estimated number for all levels

. HEALTH STATISTICS PERSONNEL (conclusion)

c) Local level (hospitals with more than 100 beds)

As in the case of the regional or national levels, only one country indicates having the necessary personnel in the professional, technical and auxiliary categories.

At this level, it is of critical importance to be able to rely on the necessary personnel since this is where the information originates. Any error in the information at this level will be reflected at all the other levels and neither computers nor sophisticated statistical methods will be able to correct this error. On the contrary, they will only be able to aggravate it by providing a false sense of security.

d) Local level (hospitals with fewer than 100 beds and other health institutions)

A serious problem at this level is the shortage of personnel, their lack of training and the continuous transferring of such personnel. In general, there are no personnel who are devoted exclusively to this work. It is the nursing auxiliary or the administrative auxiliary who is charged with the duty of working with medical records, reports and statistics at times when she is not doing her principal job or simultaneously with her own duties. As in the case of the other levels, only one country indicates having sufficient personnel to work on medical records and statistics.

7. DEVELOPMENT OF HUMAN RESOURCES

7.1 Human resources planning process

	Goals have been established for development of human resources		7.1.1 Integration with the health planning process				7.1.2 Manpower development plan				7.1.3 Coordination with the national manpower development plan					7.1.4 University participation in the process			
											There is a national plan		There is coordination						
	Yes	No	Yes	Partially	No	Is a national goal	In operation	Formulated	There is no plan	Is a national goal	Yes	No	Yes	Partial	No	Yes	Not sufficient	No	Is a national goal
Barbados	x			x				x			x		x			x			
Bolivia		x			x				x			x	-	-	-			x	
Brazil	x					x	x			x	x			x			x		
Canada		x	x				x				x		x			x			
Colombia	x		x			x	x									x			
Costa Rica	x	x	x					x				x	-	-	-	x			
Chile	..	..			x			x				x	-	-	-		x		
Ecuador	x			x		x		x		x	x			x		x			
El Salvador	..	..		x			x					x	-	-	-			x	
United States	..	..																	
Guatemala	x					x				x		x	-	-	-			x	
Guyana	x				x			x			x			x			x		
Honduras	x			x				x				x	-	-	-		x		
Jamaica		x			x				x		x			x			x		
Mexico	x			x		x		x		x	x			x		x			
Nicaragua	x		x							x		x	-	-	-	x			
Panama	x			x		x		x		x	x			x			x		
Paraguay	..	..		x				x			x			x			x		
Peru		x		x					x			x	-	-	-		x		
Dom. Republic		x			x				x			x	-	-	-			x	
Trinidad-Tobago	x			x					x			x	-	-	-		x		
Venezuela	x			x		x		x		x	x			x			x		

7.2 Manpower training program

	7.2.1 Updated inventory of human resources (Number, type, distribution and employment)				7.2.2 Projection of manpower requirements to achieve the objectives of the health plan				7.2.3 Design and utilization of personnel models to maximize efficiency of the services					
									Design			Utilization		
	Exists	Non-existent	In operation	Projected	Made	Not made	In operation	Projected	Yes	No	Projected	Yes	No	Projected
Barbados		x						x		x			x	
Bolivia				x				x			x			x
Brazil		x						x		x			x	
Canada	x						x		x			x		
Colombia			x						x			x		
Costa Rica			x		x						x			x
Chile	x				x					x			x	
Ecuador	x						x				x			x
El Salvador			x				x			x			x	
United States														
Guatemala		x			x						x			x
Guyana	x				x					x			x	
Honduras			x				x			x			x	
Jamaica			x				x			x			x	
Mexico				x	x					x			x	
Nicaragua			x				x				x			x
Panama	x				x						x			
Paraguay	x				x					x			x	
Peru			x					x			x			x
Dom. Republic		x		x				x			x			x
Trinidad-Tobago		x				x				x			x	
Venezuela				x			x			x			x	

REGIONAL GOAL: To develop a process of manpower planning in each country that is integrated with health planning.

By 1974, 13 out of 19 countries had established national goals of some type for manpower development within the decade.

7. DEVELOPMENT OF HUMAN RESOURCES

7.1 Manpower planning process

The section in the Ten-Year Health Plan dealing with a regional goal of developing a manpower planning process integrated with health planning in each country is accompanied by a series of recommendations for achieving this goal, for example, integration with the general social and economic development processes, the definition of functions and modules of administrative and supporting auxiliary personnel, the strengthening of information systems, creation of new types of personnel and expansion of the existing force with a view to increasing coverage, training researchers and promoting research, strengthening personnel training institutions and programs and, in general, developing the organization and obtaining maximum use of manpower.

Manpower planning processes assume widely different features and patterns in different countries. In some countries, it consists of a coordinating mechanism or an advisory committee, while in others it relies on a permanent organization, operational capability and power to make decisions and implement plans. Similarly, coverage of the process varies greatly, depending on the degree of activity of the agencies employing the manpower. Planning periods vary from short-range programming to long-range forecasts. Even within these various patterns, a firming up of the processes has been observed during the first few years of this decade: recognition of the problem, organization of technical units, increasing participation by the institutions of the sector, development of methodologies and training of specialized personnel.

7.1.1 Integration with the health planning process

The manpower planning process is integrated with the health planning process in four of the 21 countries that furnished a report (less than 1 out of 5). In another 10 (less than half), there exists partial integration, which is perhaps not well defined, although four of these 10 countries have proposed integration as a national goal. In the remaining seven countries (1 out of 3), there exists no integration of the processes. However, in two of these, such integration has been proposed as a national goal for the decade.

One of the principal difficulties facing integration is the partial coverage and the short health planning periods which limit the possibility of deriving a general resource plan from the health plan.

7.1.2 Manpower development plan

Fourteen countries (2 out of 3) had formulated their health manpower development plans before 1974. In only four of these countries is the plan in operation. In the remaining seven countries (1 out of 3), there exist no plans, although two of these have proposed formulation of these as a goal for the decade.

Most of the existing plans list priorities without analyzing strategic alternatives. Some of the plans establish escalating goals for training, and forecast the required teaching and financial resources. The plans rarely consider changes in personnel utilization. Progress has been recorded in the preparation of short-, medium- and long-range sequential plans.

7.1.3 Coordination with the national manpower development plan

Only half of the countries report that a national plan of this type exists. In every case, this plan is being coordinated with the health manpower plan (in most cases only partially), whether formulated or operational.

7.1.4 University participation

University participation in the health manpower planning process is indispensable. Nevertheless, such participation has been indicated only by seven countries (1 out of 3). In the majority of cases, this participation is insufficient and in four cases it is nonexistent.

It is expected that this participation will be increased by promoting institutional planning and by training planning personnel for the educational institutions.

7.2 Manpower training program

7.2.1 Manpower inventory

Manpower programming requires availability of a manpower inventory that will permit knowing the number, type, distribution and utilization or employment of health personnel. Such an inventory exists only in six countries and is being prepared by seven others. It is to be hoped that nearly two-thirds of the countries will possess such an inventory in the near future. On the other hand, there are eight other countries that do not have this type of inventory available, although four of them propose to put them into effect.

7.2.2 Projection of manpower requirements

Seven countries (1 out of 3) have projections of manpower requirements for accomplishment of the health plan objectives (in spite of the fact that in two of these the manpower plan has not been integrated with the health plan). In another seven countries, these projections are being prepared. Most of the remaining countries have plans to prepare such projections.

The techniques employed for establishing future requirements continue to be of a rudimentary nature. Nevertheless, some countries plan to use more adequate techniques.

7.2.3 Personnel modules

One recommendation of the Ten-Year Health Plan for facilitating the manpower planning process was the design and employment of personnel modules in order to maximize the efficiency of the services. Only two countries report that they have designed and are using such modules. Another eight countries have plans to design modules of this type.

It should be pointed out that the methodological difficulties involved in simultaneously working on a quantitative planning project and making changes in assignment of personnel duties are enormous.

7. DEVELOPMENT OF HUMAN RESOURCES (continued)

	7.2 Manpower training program (conclusion)									
	7.2.4 Creation of new type personnel			7.2.5 Productive capacity of educational and training institutions to train personnel				7.2.6 Capacity of country's health services to absorb human resources			
	Yes	No	Under study	Has been determined	Has not been determined	In process of determination	In process of determination	Has been determined	Has not been determined	In process of determination	Determination projected
Barbados			x	x						x	
Bolivia			x		x				x		
Brazil			x			x		x/1			x
Canada	x			x							
Colombia			x	x				x			
Costa Rica			x	x				x			
Chile			x				x		x		
Ecuador			x			x				x	
El Salvador		x									
United States											
Guatemala	x				x		x		x		x
Guyana			x		x				x		
Honduras			x	x						x	
Jamaica	x					x			x		
Mexico	x			x						x	
Nicaragua			x								
Panama	x					x				x	
Paraguay	x					x			x		
Peru			x				x				x
Dom. Republic		x			x				x		
Trinidad-Tobago			x		x					x	
Venezuela			x			x				x	

/1 Partially

7.2.4 Creation of new types of personnel

The Ten-Year Health Plan recommended creation of health personnel and an expansion of the existing forces by the various countries (in accordance with the conditions peculiar to each country) so as to permit increasing coverage of the services, principally in rural zones. In most of the countries (19 of the 21 that replied) such creation is being considered and, in some of them, it has practically been adopted.

7.2.5 Productive capacity of training institutions

Of the 19 countries that replied, six have determined the productive capacity of their training institutions and another six are now in the process of making this determination so that, within a short time, three out of five countries will possess an evaluation of their productive capacity. Only three of the seven remaining countries have plans to make such an evaluation.

7.2.6 Manpower absorption capability of health systems

The capability of the country's health service systems to absorb manpower has been determined only by three countries (only partially by one of them) of the 18 that replied to this section. This capability is now being investigated by another seven countries so that there could soon be nine countries (half of those which replied) which could know the manpower absorption capabilities of their health service systems. Of the remaining countries, only two plan to carry out this investigation.

The capability to absorb or to retain personnel is a factor of fundamental importance. Its recognition by the institutions of the sector constitutes one of the most important achievements in recent years.

7. DEVELOPMENT OF HUMAN RESOURCES (continued)

7.3 Personnel education and training goals

Professional personnel

	DOCTORS		DENTISTS		NURSES		VETERINARY DOCTORS		SANITARY ENGINEERS	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados	5.5*		0.6*		17.9*		5		1	1
Bolivia	2352	977	976	111	835	686	273	67	32	53
Brazil	7.5*	8.2*	0.8*	4.8*	0.9*	1.3*		13000		290
Canada	15.13*		3.46*		53.37*		2500			
Colombia	9718	8900	2740	3007	1851	5751	46	3151	40	351
Costa Rica	5.2*	6.68*	1.4*	2*	4.2*	4.8-5.3*	1	2	19	18
Chile	5.87*	6.9*	1.99*	3.8*	2.88*	5.7*	...	...	...	...
Ecuador	3109	5555	579	1270	766	2380	4		118	
El Salvador	2.4*		0.9*		2.5		24			
United States										
Guatemala	2.2*	300 p. yr.	0.5*	151	1.4*	1606	0.2*		0.1*	
Guyana	160	85	20	6	629 /2	900	7	12	-	3
Honduras	715	350	170	120	450	200	10			
Jamaica	4.1		0.5*		5.7*	1000	30		4	
Mexico	37100	40010	5300	8720	21247	25720	2600		250	100
Nicaragua										
Panama	7.2*	9.5*	1.2*	2.0*	6.8*	10*	18	30	5	40
Paraguay	5.8*		1.8*		1.3*					
Peru	7818	3270	2463	400	403	2200	50	24	40	24
Dom. Republic	4.5*		1.1*		0.79*		0.01*		0.14*	
Trinidad-Tobago	468		62		395		22		3	
Venezuela	9325	8000	2212	3270	5714	3500	750		130	

* Number existing or expected per 10,000 inhabitants

/1 1974 /2 Includes midwives

	STATISTICIANS		MEDICAL REGISTER SPECIALISTS		PLANNERS		ADMINISTRATORS		INFORMATION SPECIALISTS	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados	1	-	-	1	0	2	13	4	-	-
Bolivia	-	80	-	4	11	19	8	12		
Brazil		150		50		1500		1450		500
Canada			1397							
Colombia	12	35	-	-	283	200	135	750	-	-
Costa Rica	3	8	1	2	16	10	45	24	-	-
Chile										
Ecuador	1	10	4	24					38	
El Salvador	7 /1		8							
United States										
Guatemala										
Guyana	0	2			0	1			0	
Honduras	45	40								
Jamaica	1		2		-		30		0	
Mexico					3	200				
Nicaragua										
Panama	0		-		50	70				
Paraguay										
Peru					183	56	226	60		
Dom. Republic	0.06*									
Trinidad-Tobago	12		3		1		10			
Venezuela				250						

* Number existing or expected per 10,000 inhabitants

/1 1974

7.3 Regional Goals for Personnel Training (1971-1980)

a) Professional personnel

Medicine:	8 doctors per 10,000 inhabitants
Dentistry:	2 dentists per 10,000 inhabitants
Nursing:	4.5 nurses per 10,000 inhabitants
Veterinary science:	8,000 veterinarians to be trained
Sanitation:	3,200 engineers to be trained
Statistics:	300 statisticians to be trained
Medical records:	100 medical records specialists to be trained
Planning:	3,000 planners to be trained
Administration:	3,000 administrators to be trained
Information sciences:	1,000 specialists in information sciences to be trained

7. DEVELOPMENT OF HUMAN RESOURCES (continued)

7.3 Personnel education and training goals (continued)

Professional personnel (conclusion)

	EPIDEMIOLOGISTS		PSYCHIATRISTS		PSYCHIATRIC NURSES		OCCUPATIONAL THERAPISTS		NUTRITIONISTS	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados	1		3		106		2		2	
Bolivia	33	9	20	5	-	-	-	10	24	10
Brazil									0.1*	
Canada			1321						1713	
Colombia	210	350	117	96	8	24	44	171	426	994
Costa Rica	1.5*		25	35	..	..	0.2 /2	1 /2	12 /5	11 /5
Chile									0.05*/3	
Ecuador									24	
El Salvador										
United States			23236	40300	37860	55700			0.02*	
Guatemala										
Guyana			2				1		1	
Honduras		30		20				4		
Jamaica	1		7		70	100	-		3	
Mexico							94 /1	270	57	211
Nicaragua										
Panama	1	4	24	50	4	78			12	104
Paraguay										
Peru		16	174	20	292	118			292 /4	118 /4
Dom. Republic										
Trinidad-Tobago	1		7		215		6		3	
Venezuela	10	50	55	200	20	60	92	140	7	

* Number existing or expected per 10,000 inhabitants
/1 1974 /2 Per 50 psychiatric beds /3 For the National Health Service only
/4 Dietitians /5 Five nutritionists and the remainder dietitians

7.3 Personnel education and training goals (continued)

Professional personnel (conclusion)

	LABORATORY WORKERS		HEALTH EDUCATORS		RADIOLOGISTS		OTHERS		OTHERS	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados	2		1			1	7 /2	2 /2		
Bolivia		126	13	32			0.2*/2		0.2*/3	
Brazil	98					1024				
Canada	1865	994	-	-	123	448				
Colombia	225	62	0.03*		19	45-67			445 /3	71 /3
Costa Rica										
Chile							1.24*/4	2.4/4		
Ecuador	32		38		8		342 /5		88 /3	
El Salvador										
United States							21000 /6	30800 /6	18200 /7	30000 /7
Guatemala	0.1*	111	0.02*				0.5*		0.4	
Guyana	3		1	4	1	2				
Honduras										
Jamaica	10		7							
Mexico									800 /8	600 /8
Nicaragua										
Panama	104 /1	144	14		55 /1	88				
Paraguay										
Peru			27	20						
Dom. Republic	48		2		10					
Trinidad-Tobago	32		6		2				289 /2	
Venezuela	730	1500								

* Number existing or expected per 10,000 inhabitants
/1 1974 /2 Social workers /3 Pharmacists and biochemists /4 Midwives
/5 176 social workers and 166 midwives /6 Social workers in psychiatry
/7 Psychologists /8 Teachers of public health

7. DEVELOPMENT OF HUMAN RESOURCES (continued)

7.3 Personnel education and training goals (continued)

Intermediate-level personnel

	NURSING		SANITATION		MEDICAL RECORDS		STATISTICS		LABORATORIES	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados			48		7	1			36	
Bolivia			135	275			20	100	28	33
Brazil	2.7*			15000		2000		125	0.4*	
Canada					1397				8835	
Colombia	-	-	1456	482	-	1500	162	454	412	1131
Costa Rica			103	202	44/1	64			234	315
Chile										
Ecuador	-	-	972		180	400	51	200	12	
El Salvador										
United States										
Guatemala										
Guyana	48	676							50	47
Honduras		450								
Jamaica	150 /2	500	351		-	50	2			
Mexico	4450	12600	168	180	/3	/3	400/3	360/3		
Nicaragua										
Panama					0	20	13	26	328 /2	362
Paraguay										
Peru	4493	2500	172	60	/3	/3	154/3	75/3	489	266
Dom. Republic	317		256				33		190	
Trinidad-Tobago	1937		130		10		18			
Venezuela			1196	650	282	250			101	

* Number existing or expected per 10,000 inhabitants
/1 1973 /2 1974 /3 Medical register specialists incorporated in groups of statisticians.

Intermediate-level personnel (conclusion)

	RADIOLOGY		SOCIAL WORK		FOOD AND NUTRITION		OTHERS		OTHERS	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados	14		4	2						1 /1
Bolivia	26	22	10							
Brazil	0.5*								0.3* /2	
Canada	4627									
Colombia	266	158	132	96			805 /3	540 /3	132 /4	96 /4
Costa Rica	72	5			33 /5	22 /5				
Chile										
Ecuador	13						10 /6			
El Salvador										
United States										
Guatemala										
Guyana	16	20						5 /7		
Honduras										
Jamaica								30 /8		
Mexico							526 /9	748 /9		
Nicaragua										
Panama										
Paraguay										
Peru										
Dom. Republic	46									
Trinidad-Tobago										
Venezuela	306				228 /10					

* Per 10,000 inhabitants
/1 Health education /2 Visiting nurse /3 Instrument nurse /4 Psychotechnicians
/5 Food technicians (17 nutrition assistants in 1971) /6 Health promoters /7 Maintenance
/8 Dental assistants /9 Rehabilitation technicians /10 Dietitians

b) Medium-level personnel

Medical records:	4,000 medical records technicians to be trained
Statistics:	250 statistical technicians to be trained

7. DEVELOPMENT OF HUMAN RESOURCES (continued)

7.3 Manpower education and training goals (continued)

Auxiliary personnel

	NURSING		ANIMAL HEALTH		STATISTICS		LABORATORIES		RADIOLOGY	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados		13.1*							11	
Bolivia	1054	1490			120	450		152		82
Brazil	8.1*	14.5*		15000		20000				
Canada	22.56*									
Colombia	9664	9500			230	194				
Costa Rica	13*	13*			36 /1	395	217	169	38	48-53
Chile	18.69*	22*								
Ecuador	5753	9522	27		124	375	333		171	
El Salvador										
United States										
Guatemala	3.6*	5321								
Guyana	371									
Honduras		2000						100		100
Jamaica	1.1*	0		25			150		-	
Mexico	25180	71280			0	560				
Nicaragua										
Panama	11.2*	20*			15	125				
Paraguay										
Peru	10420	2400			223	480				
Dom. Republic	6.8*	4200								
Trinidad-Tobago	244				12					
Venezuela	14105	4600			670 /2	2560 /2	373			

* Number existing or expected per 10,000 inhabitants
/1 1973 /2 Medical records auxiliaries

Auxiliary personnel (conclusion)

	DENTISTRY		FOOD AND NUTRITION		PHARMACY		OTHERS		OTHERS	
	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980	Number available in 1971	Number to be trained by 1980
Barbados	-	10					36 /1			
Bolivia							60 /3			
Brazil		2.2*					0.3* /3			
Canada	0.39*									
Colombia	117	1938					1442 /4	10000 /4	1.2*/7	12.3*/8
Costa Rica	30	105	21		365	192				
Chile	2.5*	4.5*								
Ecuador	111	793			344					
El Salvador										
United States										
Guatemala										
Guyana	8	27						60 /5		
Honduras										
Jamaica	43									
Mexico	312		368							
Nicaragua										
Panama	0*	3*								
Paraguay										
Peru							884 /6	744 /6		
Dom. Republic										
Trinidad-Tobago	11									
Venezuela			418							

* Number existing or expected per 10,000 inhabitants
/1 Sanitation auxiliary /2 Occupational therapy /3 Lay midwives /4 Health promoters
/5 Polyvalent health services /6 Sanitation auxiliaries /7 Quarantine guards
/8 Includes 4.3 rural "attendants" and 8.0 community volunteer workers

c) Auxiliary personnel

Nursing:	14.5 auxiliaries per 10,000 inhabitants
Animal health:	30,000 veterinary auxiliaries to be trained
Statistics:	40,000 auxiliaries to be trained
Dentistry:	2.2 auxiliaries per 10,000 inhabitants

8. DEVELOPMENT OF PHYSICAL RESOURCES

	Goals have been established for the development of physical resources						8.1 Inventory of premises and installations for delivery of health care to the population				8.2 Installed capacity development plan		
								Exists					
	Yes	No	In installation	In maintenance	In replacement	In conversion	Non-existent	Not current	Current	Projected	Exists	Non-existent	Projected
Barbados	x		x	x	x	x			x			x	
Bolivia	x		x	x	x	x			x				x
Brazil		x					x					x	
Canada	x /1								x		x		
Colombia	x								x		x		
Costa Rica	x		x						x		x		
Chile		x							x /2		x		
Ecuador	x		x		x	x			x		x		
El Salvador													
United States	x								x		x		
Guatemala	x		x	x	x	x	x				x		
Guyana	..	..						x				x	
Honduras	x							x			x		
Jamaica	x		x	x	x	x		x			x		
Mexico	x		x						x		x		
Nicaragua	x								x		x		
Panama	x								x				x
Paraguay		x						x			x		
Peru	x								x		x		
Dom. Republic	x								x		x		
Trinidad-Tobago		x								x		x	
Venezuela	x								x		x		

/1 Goals established for each one of the provinces /2 Data not processed

8. DEVELOPMENT OF PHYSICAL RESOURCES

REGIONAL GOALS: To create the following facilities within the regionalization systems: minimum integral health service units until a coverage of one unit per 5,000 inhabitants in towns of less than 2,000 inhabitants is reached; health centers with minimum basic integral services for towns of 2,000 to 20,000 persons; institutions with basic and specialized integral services in communities of more than 20,000 inhabitants.

To increase the installed capacity by 106,000 general type hospital beds by remodeling and converting beds which have had long service, whenever possible.

To progressively incorporate specialized medical care services in general hospitals in accordance with levels of care and within a regionalization plan.

To create maintenance systems for installations and equipment.

These goals for development of physical resources are closely related to the goals for extension of coverage. Therefore, some aspects will have to be reconsidered when the countries acquire greater experience with the formulation and development of coverage extension programs.

Twenty-one countries replied to this section of the evaluation. Of these, only four (1 out of 5) have not yet set goals for development of their physical resources. Although few of the countries indicate the aspects covered by the goals, it is evident that, in most cases, they refer to the installation of buildings, the replacement and conversion of the installed capacity being less important. Quite conspicuous is the small number of countries which have set maintenance goals.

8.1 Inventory of buildings and installations

Only three countries report that they do not possess an inventory of the buildings and installations for serving the public. In all the other countries, such an inventory probably exists, although in four they are not up to date. Of course, the responses do not include information with respect to the characteristics of the inventories such as their coverage, contents, lists or suitability so as to be able to obtain the information which could be requested. From this last point of view, judging by the urgency with which the preparation of cadastres is requested in many countries, it would appear that the existing inventories leave something to be desired.

8.2 Development plan for installed capacity

Fifteen countries (nearly 3 out of 4) state that they have a development plan for installed capacity. Of the six countries that do not have such a plan, two are planning to formulate one.

8. DEVELOPMENT OF PHYSICAL RESOURCES (continued)

	8.2 Installed capacity development plan (conclusion)											
	8.2.1 Investment plan				8.2.2 Derived from plan for services			8.2.3 Content				
	Exists	Non-existent	Series of individual projects	Projected	Yes	In part	No	New construction	Renovation of installed capacity	Expansion and conversion	Equipment	Maintenance
Barbados			x			x		x	x	x	x	x
Bolivia			x	x			x				x	x
Brazil		x										
Canada	x				x			x	x	x	x	x
Colombia	x				x			x	x	x	x	
Costa Rica	x				x			x	x	x	x	x
Chile			x				x	x	x	x	x	x
Ecuador	x				x			x	x	x	x	x
El Salvador												
United States	x				x			x	x	x	x	x
Guatemala	x				x			x	x	x	x	x
Guyana		x										
Honduras	x				x			x		x	x	
Jamaica			x				x			x		x
Mexico	x				x			x	x		x	x
Nicaragua	x				x			x	x		x	x
Panama			x			x		x	x	x	x	x
Paraguay	x					x		x	x	x	x	x
Peru	x				x			x	x	x	x	x
Dom. Republic	x					x		x		x	x	x
Trinidad-Tobago			x			x		x	x	x	x	x
Venezuela	x				x			x	x	x	x	x

8.2.1 Investment plan

Thirteen countries (nearly 2 out of 3) report having an investment plan. All of these 13 countries are included in the 15 which have a development plan for installed capacity. Another six have only a group of isolated projects which do not constitute a plan. Nevertheless, two of them state that they have a development plan for installed capacity. It is likely that all the countries need to make an effort as soon as possible to formulate or reformulate their respective investment plans.

8.2.2 Derivation of a service plan

Sixteen of the 19 countries which claimed to have an investment plan or a group of isolated projects have derived the plan or the projects for a service plan. Formulation of service plans by all of the countries which propose to extend coverage will have to be expedited and it is to be hoped that in no case are there plans which are not derived from the aforementioned service plans.

8.2.3 Contents of the plans

Practically all of the plans and projects for physical investments refer to the construction of new facilities and to equipment. Slightly smaller is the number of such plans and projects which include recovery of installed capacity, expansion, remodeling and maintenance.

8. DEVELOPMENT OF PHYSICAL RESOURCES (conclusion)

	8.3 Installation of premises for the operation of elementary care units		8.4 Installation of beds				8.5 beds for patients with chronic diseases converted to accute illnesses		8.6 Maintenance System: Specialized personnel for maintenance, per each 100 beds in hospitals with more than 100 beds	
			8.4.1 General hospital beds		8.4.2 Specialized beds					
	1971	1980	1971	1980	1971	1980	Number of beds in 1971	% converted in 1980	1971	1980
Barbados	9	14	1448 /1	1427 /1	815 /1	803 /1				
Bolivia	371	856			1567	1285	1141	0	2.2	7.6
Brazil			371218		275342		96563 /2	..		
Canada										
Colombia	1530	2000	33560	39000	13615	14000				
Costa Rica	49	341	4970	6592	2279 /3	2125 /3	1980	14	32 /4	32 /4
Chile	888	1500	36290	39198	8679	8043	..	..	..	
Ecuador	225	613	8982	20276	3384	6275	..	..	1.0	3.0
El Salvador										
United States			1004799		503189		503189 /5			
Guatemala	263	640	7849 /6		1993 /6		842 /6			
Guyana	35		1709	1654						
Honduras	67	463	3084 /7	3743						
Jamaica	49		3215	3755	4029	1928	3639		6	
Mexico	2031	8735	70000	94000						
Nicaragua	110	150	4945	8055	980	930				
Panama	104	137	4661	6666	3283	4106	1355	29	..	..
Paraguay	168/7	280	2797							
Peru	969	1572	24334	27478	5401	5782	3645	16.5	..	..
Dom. Republic	104	300	5407	6331	2440	2440	1602	0	1	10
Trinidad-Tobago	25	18	3942	3775	1881	1809	1777	4	0.00	0.05
Venezuela	2640	2850	24026	32799	8029	6687	8029	19 /7	22 /7	28

/1 Number estimated considering 36% of specialized beds in general and specialized hospitals
/2 Psychiatry and leprosy /3 Only psychiatric, tuberculosis, leprosy and nutrition beds
/4 Number of maintenance engineers and technicians /5 Includes 17,806 tuberculosis, 418,487 psychiatric and 42,282 other beds. /6 1969 /7 1974

8.3 Installation of premises for the operation of elementary care units

Only 18 of the 22 countries participating in the evaluation reported on the number of elementary care units that they possessed in 1971 according to the national definition of this type of unit. These units reached a total of 9,637 that would service a total population of 142.4 million inhabitants in these 18 countries, that is, there was a ratio of 14,800 persons per elementary care unit. The variability of this ratio among the different countries is very large, depending partially on the particular national definition employed, as for example, whether this definition considers the location of such units in rural or urban areas and the proportion of this population residing in such areas. The number of persons per elementary care unit in the 18 countries referred to varies between 4,100 and 41,300 with a median value of 20,600 persons.

Fifteen of the 18 countries mentioned, possessing 9,258 elementary care units in 1971, estimate that this number will be increased to 20,451 units by 1980, that is, there would be an increase of 10,923 new units that would constitute 115% of the number existing in 1971. A single country estimates a decrease of these units by 28%, whereas two countries forecast nearly a sextuplication of the 1971 figure. The median increase is 100%, that is, there would be twice as many units in 1980 as existed in 1971.

Thus, no matter what national definition is adopted, the elementary care units in Latin America and the Caribbean area could perhaps double in number between 1971 and 1980. At least, this is what is indicated by the 18 reporting countries whose average ratio decreased from 14,600 to 9,400 inhabitants per elementary care unit. The increment proposed will require a large expenditure of funds, manpower training, development of the necessary administrative support and the achievement of greater participation by the community so as to multiply the efficiency of the investment.

8.4 Installation of beds

The 19 reporting countries had a total of 1,617,000 general purpose beds for serving a population estimated to be nearly 470 million inhabitants. Thus there was an average ratio of 3.7 general purpose beds per 1,000 inhabitants for all the countries. The ratios for individual countries ranged from 1.1 to 6.1 beds per 1,000 inhabitants, with 2.2 being the median value.

Fifteen countries of Latin America and the Caribbean proposed an increase in the number of general purpose beds by 1980. These countries, which had a total population of 129.6 million inhabitants and a total of 230,573 general purpose beds (1.8 beds per 1,000 inhabitants) in 1971, propose reaching the figure of 294,749 general beds by 1980, that is, they would be increased by 27.8% (a rate of increase lower than that of the population), thus reaching a level of 1.7 general purpose beds per 1,000 inhabitants. It should be pointed out that not all of the additional beds are new, since some of them have been obtained by conversion of special purpose beds.

With respect to special purpose beds, 16 reporting countries, with a total population of 388 million inhabitants, owned 837,000 of them in 1971, i.e., a ratio of 2.2 beds per 1,000 inhabitants. Thirteen of these countries, all of them from Latin America and the Caribbean area with an actual population of 80 million in 1971 and a projected population of 110 million by 1980, should experience an insignificant increase in number of special purpose beds (approximately 56,000) during this period, the ratio of beds per 1,000 inhabitants dropping from 1.4 to 0.5 by the end of the period.

The obvious decrease in availability of beds greatly postpones achievement of the goals established by the Ten-Year Health Plan. Even if an effort were made to make new investments in the installation of beds, their utilization would have to be carefully planned and the utilization of day clinics and of elementary care units, as well as of less complex basic services, would have to be increased.

9. FINANCING

	9.1 Programs for the analysis of financing and expenditure			9.2 Analysis of production functions				9.3 Budget for current public sector expenditures assigned to the Health Sector(%)		9.4 Community self-help programs		
	In operation	Nonexistent	Planned	Of the sector	For some institutions	For some establishments	Not made	Projected	1971	1980	Exist	Do not exist	Projected
Barbados	x			x					18			x	
Bolivia	x				x				1.23	1.79	x		
Brazil	x				x				3.1/1			x	
Canada	x			x					15.8	15.8	x		
Colombia	x				x								x
Costa Rica	x						x		20		x		
Chile			x				x		9.8	9.8	x		
Ecuador		x				x			7.8 /2			x	
El Salvador													
United States	x				x				9.8		x		
Guatemala		x					x		9.48			x	
Guyana		x					x				x		
Honduras													
Jamaica		x					x		9.1/3			x	
Mexico	x			x							x		
Nicaragua	x						x		3.1/4				x
Panama	x						x		31.1		x		
Paraguay		x											
Peru	x				x				5.5	6.5		x	
Dom. Republic		x					x		9.2		x		
Trinidad-Tobago	x					x			9.96		x		
Venezuela	x				x	x			19.4	12.6	x		

/1 Expenditures of the "União e sanamento" /2 1974 /3 1970-71 /4 Budget of the Ministry only

9. FINANCING

REGIONAL GOAL: To develop new financing systems which will make available new sources of funds to the sector and will assure the fullest extent of collaboration by the community and participation of the health sector in the key national development projects.

According to rough estimates made for 1970, the regional health sector expended approximately 1.6% of the gross internal product (GIP). According to an optimistic estimate for growth of gross internal product, the GIP could rise to approximately 6.6% per year, while the population is estimated to grow by approximately 33% during the decade.

Assuming an increment of 7% per year in health investment within the public sector, the GIP for this sector should increase to 1.65%. This increase would provide approximately 94% more funds during the decade and, on a per capita basis, would provide 45% more funds for increased services and coverage.

Since, however, an increase in expenditure in the magnitude of 7% is not considered to be within the financial capabilities of the Region's economies, other means must be found to provide the requisite funds for financing the goals established by the Ten-Year Health Plan. Therefore, this plan offers recommendations for increasing productivity of the services, elimination of duplication, adoption of low-cost technology, lengthening of equipment life, establishment of self-help programs at the community level, coordination of planning among the sectors, etc., and, in general, solving financing problems by study and exploitation of new sources.

According to the response of 20 countries which participated in the evaluation, 13 of them are conducting analysis programs for financing and expenditures. In the remaining seven countries, no such programs exist, although one country expects to embark on such a program.

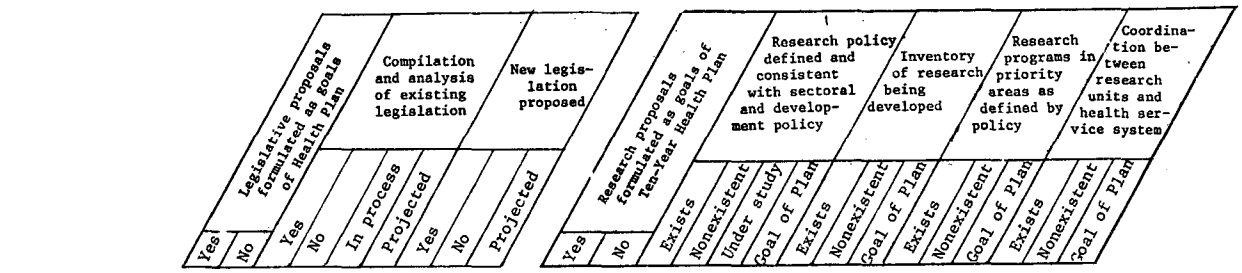
Only three countries are conducting analyses of the sector's production functions. Another six have concentrated on studying the production functions of some organizations (essentially the Ministry of Health), and still another three countries have done so for some institutions, generally the largest ones. This type of analysis is not being performed in eight countries (2 out of 5).

In 16 countries which provided information, the current expenditures budget for the public sector allotted to the operation of the health sector varies from 1.23% to 31.1% with a median value of 9.6%. Only five countries furnished estimates for 1980. Two of them maintain the current proportion, one decreases it, and the other two increase it to some extent.

More than half (11) of the countries furnish assurance that community self-help programs do exist. Eight of the countries do not have such programs, while two of them are planning to initiate them.

10. LEGISLATION

11. RESEARCH



/1 Revision of existing legislation in a continuous process /2 Partially

10. LEGISLATION

The Ten-Year Health Plan makes a series of recommendations with respect to the legal institutional system as it relates to health. Thus, it recommends studying the situation in each country, systematically summing up the demands that the technical groups in the various fields of the Health Sector wish to make in the legal system and identifying the components or levels of this system to which the demands should be directed. It also recommends definition of the health problems that call for the establishment of specific rules and regulations or the framing of laws; systematization of current legislation and issuance of the corresponding regulations; recognition and standardization of the relationships with the social control agencies responsible for strengthening the action of the health authority and with those bodies charged with applying the law and the related sanctions.

There is an evident concern in the countries with regard to the legal aspects of the situation. In fact, with the exception of four of them, all of the countries have made proposals for the passage of laws that reflect the goals existing in their health plans.

Seven countries (1 out of 3) have already compiled and analyzed the existing laws in the health field and another 11 (nearly half) are now in the process of doing so or plan to do so.

Most of the countries have drafted bills or lists of proposals, which is another indication of the concern displayed by the countries with regard to institutionalization of their organization and functions.

11. RESEARCH

REGIONAL GOALS: To develop and utilize health technologies which are adequate for the conditions of each country so as to increase the coverage and productivity of the services.
To organize multinational scientific and technological research programs.

The Ten-Year Health Plan recommends that each country develop its own research infrastructure and collaborate fully in regional programs so as to be able to choose, use and control scientific and technological developments for the mutual benefit of the nations. For this purpose, it is proposed that each country formulate its own national health research policy, that this type of research be promoted in the universities and in other institutions and that services be provided to stimulate, encourage and coordinate national health research activities.

According to the replies to the evaluation questionnaire from 19 countries, nearly two-thirds of them have proposals for pending research formulated as goals of their respective plans for the decade. Only 4 countries (1 out of 5) have a definite health research policy consistent with the sector's development policy. This policy will be studied or its formulation will be a goal of the national plan in the case of eight countries (2 out of 5). Only seven countries (less than 2 out of 5) affirm having an inventory (two of them partial) of the health research being conducted. No such inventory exists in the case of the remaining 12 countries, although two countries propose assembling one as a goal of their health plan.

Eight countries (2 out of 5) state that they are working on research programs of areas given priority by health policy, and another four countries propose carrying out these research programs as a goal of their plan.

Nine countries (nearly half) assert that the research units and the health service system are coordinated (although only partially so in the case of one country). Such coordination does not exist in the case of the 10 remaining countries. However, at least three of them intend to achieve it as a goal of their health plan.