The Office of the International Labor Organization
The Office of the Pan American Health Organization

The Initiative for Extension of Social Protection in Health to Excluded Groups in Latin America and the Caribbean

OVERVIEW OF THE EXCLUSION OF SOCIAL PROTECTION IN HEALTH IN LATIN AMERICA AND THE CARIBBEAN

Working Document N° 2

ILO Regional Tripartite Meeting with the Collaboration of PAHO on the Extension of Social Protection in Health to Excluded Groups in Latin America and the Caribbean
Mexico
29 November – 1 December, 1999

FOREWORD

There is consensus in the Americas as to the growing importance and size of the population with no coverage under social security health services, mainly informal sector workers in urban and rural areas. In certain countries coverage is very limited, in terms of both the number of persons protected and the contingencies covered.

In view of this situation, and in keeping with the objectives of the World Summit on Social Development (Copenhagen, 1995), the International Labour Organization (ILO) and the Pan American Health Organization (PAHO) have proposed an initiative seeking alternative forms of health care coverage for excluded population groups. Accordingly, these alternatives should be effective, sustainable, and proven.

The upcoming ILO/PAHO meeting in Mexico City (29 November – 1 December 1999) is the starting point for this initiative.

The ILO, working through its Social Security Department, Strategies and Tools against Social Exclusion and Poverty (STEP) Program, Regional Office for the Americas and the Caribbean (Lima), and PAHO, conducted the following studies:

1. Overview of the Exclusion of Social Protection in Health in Latin America and the Caribbean;

2. Out-of-pocket Health Expenditure in Latin America and the Caribbean: The Efficiency Rationale for Extending Social Protection in Health;

3. Elements for the Comparative Analysis of Extension of Social Protection in Health in Latin America and the Caribbean;

4. Synthesis of Case Studies of Micro-insurance and Other Forms of Extending Social Protection in Health in Latin America and the Caribbean.

These studies will serve as the basis for activities at the Mexico City meeting.

In addition, ILO and PAHO have prepared a document detailing their position regarding the extension of social protection in health for excluded populations in Latin America and the Caribbean.

This report concerns the study “Overview of the Exclusion of Social Protection in Health in Latin America and the Caribbean.” It was prepared by the Isalud Foundation, following the terms of reference established by the Pan American Health Organization (PAHO) and the International Labour Organization (ILO). The purpose of the report is to identify the population excluded from health services in the countries of Latin America and the Caribbean.

CONTENTS

EXECUTIVE SUMMARY

This study seeks to identify the scope of exclusion in terms of the size of the population affected under each of the selected variables, as shown in the Summary Table of Levels of Exclusions from Social Protection in Health.

The methodology was organized around three complementary approaches so as to measure exclusion from social protection in health from different perspectives, considering the characteristics of the health systems in the countries in the Region. These three approaches are Coverage, Access, and Structure and Processes.

The first criterion for analysis is exclusion from health coverage. Given the quality of the existing information, this means considering social security health coverage alone. For this variable, the highest percentage of excluded population occurs in countries with segmented systems.

Of course, this does not necessarily represent a lack of coverage in the health system as a whole, as we are considering only one of the system's component subsystems. Although the public subsystem functions as the principal provider, we know, nonetheless, that as long as supply rather than demand is financed, there is a great risk of not being in a position to provide adequate real coverage.

However, it must be pointed out that 217 million people in the Region do not have social security coverage. As a result, the health care needs of these people are covered by mechanisms that finance supply within the public sector and are thus affected by the income distribution problems faced by these countries.

The second criterion selected relates to access and considers different types of barriers, i.e., financial, work-related, geographical, and cultural barriers. In these cases, given the limitations of the data available, we selected some variables considered representative of each of the constraints on access to be analyzed.

Financial access is expressed in terms of the relationship between the poverty line and health expenditure as an indicator of the existing inequality. The poorest sectors spend a proportionately higher amount of their income on health services than do the wealthier sectors. This gap is evident in the percentage of people affected by financial barriers.

This indicator measures rather the quality or type of service accessed than of the number of people excluded from the system. Thus, this perspective does not allow us to define the dimensions of exclusion. Nonetheless, it can in fact be shown that the population below the poverty line will clearly not have access to different levels of health services because their income is less than US$2 per day. This represents a population of 121 million people. Judging from the health indicators in the Region, this figure would seem to be quite accurate.

A third fundamental factor in social exclusion is linked to the structure of the labor market. Social security systems are directed primarily to people working in the formal sector. Thus,

work in the informal sector is often a factor of exclusion from the health system. In recent years, 85% of the new jobs in Latin America and the Caribbean have been created in the informal sector, with the resulting loss of social security benefits.

It is very important to point out that trends in the labor market do not indicate that significant numbers of workers will gain coverage under social security systems in the coming years unless specific steps are taken in this area.

The measurement of geographical barriers was based on information published by the UNDP. The population lacking geographic access to health services numbers 107 million, and we see a close connection between geographic inaccessibility and the percentage of the rural population in the various countries, particularly countries with segmented health systems.

Approximately 15.661 million people have difficulties in accessing the services of a physician and 267.537 million are affected by a shortage of hospital beds, according to the original standard of hospital beds that should be available.

Similar results are found among population groups affected by direct process variables such as births attended by professionals (83.558 million people) and immunization coverage (82.023 million people). This leads to the inference that sectors of the population are involved in all cases.

Although, strictly speaking, we are not talking about the same population, we do see a broad area where these two population groups intersect and show similar numbers as well. Thus, 107 million people throughout Latin America and the Caribbean undoubtedly encounter difficulties in accessing some type of health service.

As for the profile of those who are excluded, although quantifying the dimensions within each group is beyond the scope of this study, we have made progress in identifying these groups in the different countries of the Region. The principal groups excluded are the poor, the elderly, women and children, ethnic groups, temporary workers, the unemployed and underemployed, and, in more general terms, the rural population

In this regard, it is possible to establish that there is a group of countries with both segmented health systems and low social security coverage in health, where the excluded represent a higher percentage of the total population.

In addition to the groups excluded from basic services, it can be inferred that there are other groups without access to more complex services although their numbers cannot be stated in precise terms.

The following table presents a summary of the levels of exclusion from social protection in health.

Table 1: Summary of the Levels of Exclusion from Social Protection in Health

Variables studied	Reference year	Excluded population %	Excluded population in thousands
Coverage			
Population without health insurance coverage	1995	46	217,779
Accessibility			
Financial inaccessibility	1989-1994	27	121,245
Geographical inaccessibility	1995	22.2	107,013
Cultural inaccessibility	1992-1993	8.8	39,932
Structure			
Shortage in the supply of total medical services	1997	4.8	23,643
Shortage of adjusted medical services	1997	3.2	15,661
Shortage of beds	1996	55.3	267,537
Processes			
Births not attended by trained staff	1996	17	83,558
Drop-out rate between BCG vaccine and vaccine with lowest percentage of coverage	1998	16.4	81,682
Population without access to drinking water and/or sewerage services	1995	32.1	152,675

I. INTRODUCTION

In recent decades the countries of Latin America and the Caribbean have witnessed profound changes marked by alternating periods of growth and economic crisis. The social protection and health sectors have also been subject to significant changes under the impetus of major reforms. Although significant achievements have been made in both sectors in the Region, there continue to be serious problems. Today, a large percentage of the population is excluded from social protection in health and thus does not have adequate access to health services. Not only is this an injustice, it poses an obstacle to the economic and social development of the countries in the Region.

It is difficult to estimate the magnitude of this problem, because exclusion is not a precise and easily identifiable condition. Exclusion actually takes many forms, ranging from a total lack of access to care to exclusion from certain benefits. Exclusion becomes apparent in different ways depending on its determinants: inadequacy or lack of supply of care; financial, geographical, or cultural barriers, etc. The heterogeneity of data or the lack of available data makes the task of measuring exclusion even more difficult.

Despite these difficulties, we must assess the extent of exclusion if we want to confront it. This document contributes elements for a response in this regard. It provides an estimate of the magnitude of exclusion in its different forms and a description of the principal social, economic, and cultural characteristics of the excluded groups.

In order to get as close as possible to reality, we have used a methodology that focuses on exclusion from three perspectives:

- limits on the scope of coverage provided by social protection systems;
- the existence of financial, geographical, work-related, and cultural barriers hindering access to health services;
- restrictions on the use of services, as evidenced by structure and process variables.

These perspectives reflect the complexity of exclusion and the relationships among the factors that give rise to it.

A research group prepared a common protocol to identify and analyze the variables associated with the different dimensions of exclusion from social protection in health, to be applied in the 33 countries of the Region. Preexisting data from various sources have been used.

It should be noted that this document does not discuss measures adopted to reduce exclusion. Such measures are the subject of other documents prepared in preparation for the Mexico meeting, particularly the study " Elements for the Comparative Analysis of Extension of Social Protection in Health in Latin America and the Caribbean," and the summary of case studies on microinsurance and other modalities for extending social protection in health.

II. THEORETICAL FRAMEWORK AND METHODOLOGICAL APPROACH

2.1 Social Exclusion and Exclusion from Social Protection in Health

Social exclusion occurs when individuals do not have access to living conditions that would allow them to both meet their essential needs (food, education, health, etc.) and participate in the development of the society in which they live.

It should be stipulated that the concept of poverty and the concept of social exclusion do not precisely overlap. In this respect, the UNDP recognizes human poverty as *the denial of opportunities and options fundamental to human development* and refers to being deprived of three essential elements: survival, knowledge, and a decent standard of living provided through general economic supply.

Social exclusion is a broad concept that is often analyzed in the literature from two perspectives.[1] The first perspective analyzes the form of exclusion. Individuals may experience situations in which they are excluded in physical (geographical isolation), economic, political, or other terms. This analysis emphasizes the multidimensional nature of exclusion and the interrelationships among its characteristic factors. The other perspective analyzes the participants and the interactions among them that lead to exclusion. It is felt that the organization of society and institutions plays a decisive role in creating the phenomena of exclusion.

In order to characterize exclusion from social protection in health, we must first recall that most Latin American health systems consist of **three subsystems**—social security, public, and private—with different degrees of development depending on the specific country.

The first subsector is **social security**, particularly through the coverage provided for illness and maternity that supplements public benefits in several countries. In general, social security institutions function as health service providers and cover middle-income sectors whose rights are established under the law. This subsector tends to have more funds than the ministry of health, and it covers a smaller sector than that covered by the ministry.

The second subsector is the **public subsystem**, which operates through the ministry of health. It is the main provider of preventive and curative services, and its natural client base is primarily the population groups excluded from the other two subsystems.

The third subsector is the **private subsystem**. This subsector focuses on curative medicine, covers primarily middle to upper income sectors of the population, and has higher quality facilities and services. The private sector has a wide variety of services, ranging from the traditional medicine sought in most countries by a middle- and low-income

1 Arjan de Haan, Poverty Research Unit, University of Sussex, Social Exclusion in Policy and Research: Operationalizing the Concept, IILS no. 111, 1998.

minority to the benefits provided by for-profit or non-profit NGOs and private insurance plans.

Exclusion from social protection in health is defined here as an individual's inability to obtain a guarantee of adequate access to health services[2] through one or more of these three subsystems[3].

The methodology is designed to identify exclusion by applying a "successive approximations" device. It aims to determine the magnitude of the phenomenon, expressed in the size of the population excluded from social protection in health in the countries of Latin America and the Caribbean, and to identify the profiles of the groups suffering the results of this situation.

To this end, a set of variables has been selected and analyzed in all the countries studied. These variables relate to different dimensions of exclusion. The scope of the coverage offered by social protection systems in health is considered first. Then, variables related to access are used to examine the different barriers hindering access to health services. Finally, variables related to structures and processes are used.

This study does not seek to address the problems of social exclusion in all their complexity. However, as indicated earlier, it is important to note that exclusion in general and social exclusion from social protection in health in particular are the result of a set of interdependent factors and are directly influenced by the participants and their interrelationships.

2.2 Coverage under Existing Systems

The relationship among the three subsystems of the health sector indicated above is not the same in all Latin American and Caribbean countries. There are differences in the degree of integration/segmentation among the systems in terms of the delivery and financing of services as well as their respective beneficiary populations. This leads to a consideration of the constraints on access to services, comparing them to the constraints on coverage.

On the one hand, when the system is **segmented,**[4] exclusion from social security in the low- and middle-income countries—*and in upper-income countries but with a large gap between the upper- and lower-income sectors*—becomes apparent in the market's limited ability to ensure equitable access in the quantity and quality of care, and in the absence of a collective risk management fund that is administered by the State that makes it possible

2 According to PAHO/WHO, health is defined as the individual's state of physical, psychologtical, and social well-being.

3 Coverage by private commercial insurance is not considered part of the system of social protection unless such systems participate in the context of the national social security system, as in the case of Chile. The fact that an individual freely opts to use private insurance to supplement or replace other systems is considered related to individual rather than social protection.

4 In a segmented system as opposed to an integrated system, the different subsectors act without coordination.

to avoid adverse selection. To the extent that systems are not integrated, access to these services is inversely related to the complexity and cost of services. This means that access to diagnostic and hospitalization services tends to be more limited.[5]

On the other hand, countries with greater **integration** have national health systems or there is coordination between the public sector and the social security system and a division of work and responsibilities. Integration reduces the inequality of care between urban and rural areas, although the curative and urban nature of the system cannot be reduced. In countries with integrated health systems, we see better health indicators and coverage, more advanced epidemiological profiles, and a better-than-average per capita yield on investment in health.

In this regard, Maceira states that *in countries with greater coordination in the supply of services, either from within the public sector or based on contracts between public or private providers and the social security system, significant percentages of coverage are achieved, even at lower spending levels. These percentages fall as segmentation increases.*

Based on this first dimension, the study will focus on the coverage provided by the systems, understood as *health care for a given population based on a group of standardized actions concerning the individual and the environment,*[6] establishing the magnitude and distribution of health care under the different subsectors—*public, social security, and private*—in each country. As indicated, this coverage should be considered in terms of the health system's level of integration or segmentation.

To appreciate this level of coverage, the study takes up again the methodology proposed by Mesa Lago, i.e., that coverage can be broken down into **legal coverage**—*coverage prescribed by law but not always enforced*—and **statistical coverage,** *based on estimates of the protected population that are closer to the reality but not always reliable.* Both legal coverage and statistical coverage are included in the concept of **theoretical coverage.** In addition, all these are distinguished from **real coverage,** which is defined as *the difference between the theoretical coverage offered to the population and the percentage of the population that encounters several types of problems in accessing that coverage.* These differences reveal the magnitude of the "inaccessibility" of health services.

However, given the multidimensional nature of the phenomenon, this first dimension provides no more than a preliminary estimate of the scope of exclusion. Thus, it is expected, for example, that the public sector will provide preventive and curative care to the

5 Maceira observes that segmented health care systems are defined in such a way that patients without institutional affiliation are those that direct their demands among providers. In the case of markets where the user's information is incomplete, this mechanism limits the possibility of effective treatment. Maceira, *Fragmentación e Incentivos* IDB 1996.

6 This definition can be likened to the definition of theoretical coverage, which refers to the population that the system claims to reach under each subsystem.

uninsured, primarily to the indigent and low-income groups, based on the concept of social welfare. In reality, these groups do not benefit from protection for various reasons.[7]

2.3 Accessibility of Services

Secondly, the various restrictions on access to health services are analyzed. Accessibility refers to *the ease with which the population is able to obtain health services on an equitable basis*, considering various types of barriers. Four aspects are considered here: financial, geographical, work-related, and cultural. The analysis of the different aspects of accessibility affords a more precise idea of real coverage.

a. Financial Accessibility

Financial accessibility is understood to mean the availability of financial resources for the population to pay for the direct expenses (drugs, fees, copayments, etc.) or indirect expenses (transportation, lost income) that health care represents. Even in public systems with universal free coverage, medical care implies direct outlays for the beneficiary population. As a result, financial barriers on access to health care can be deemed to exist.

On the one hand, health expenditure is related to income. When people's incomes increase, they are able to allocate a higher percentage of income to health care. However, when income falls, there are still minimum health costs that are unavoidable, and their health may be affected if such expenditures are not made. Thus, people's spending or direct outlays for health are very regressive. This means that the poor spend proportionately more on health than the rich.

On the other hand, financial access is a direct function of public spending on health. Given that public expenditure (particularly for primary care) has a demonstrated redistributive effect, it is to be expected that the higher the levels of public expenditure, the greater the access of the poor to health services, and accordingly, the lower the levels of exclusion. Furthermore, when private expenditure is higher than public expenditure, we can expect that the financing of activities will be less equitable and the exclusion higher.

The analysis of per capita private spending on health may represent a way to estimate the outlays of individuals to gain access to private health services, as we do not have precise information on out-of-pocket expenditure in each country. In addition, the percentage of the population below the poverty line will be used as an indicator.

To analyze the barriers to financial access, we use socioeconomic variables, such as per capita income and the poverty line, and variables directly related to the health system, such as per capita public spending on health and per capita private spending on health.

b. Geographical Accessibility

7 In this context, Mesa Lago notes that social assistance directed to lower-income groups depends on the access that such groups have to free or highly subsidized care, because inequitable access to services exacerbated the effect of poverty. Mesa Lago *Sistemas de Salud*, Peru 1994

The principle of *accessibility* refers to the distribution and location of services, the elimination of barriers or constraints, i.e., fundamental components of the concept of *coverage.* It assumes the existence of a timely, systematic supply of services that are adequate to the size and structure of the population and the characteristics of its needs, and to the nature of the population's needs or problems with respect to health.

It can be seen that family groups living in rural areas are more affected by social exclusion, not only because of poverty but because of the lack of a supply of adequate health services located nearby.

An indicator of geographical access has been developed by the UNDP in order to take into account the difficulties confronting a significant portion of the population when seeking health services. This indicator is analyzed below.

c. Work-related Accessibility

A third key factor in social exclusion involves the structure of the labor market. Social security systems are directed primarily to people working in the formal sector. Thus, work in the informal sector is often a factor of exclusion from this type of system. Also, precarious jobs and clandestine work in the formal sector do not generally allow workers to benefit from adequate social protection.

A two-fold trend was noted in the Region in the relationship between employment and the labor market. First, the informal sector of the economy has grown in most countries of the Region. In recent years, 85% of the new jobs in Latin America and the Caribbean were created in that sector,[8] with a proliferation of low-paying jobs. This is the case with the self-employed, wage earners in microbusinesses, and domestic workers, who have neither job stability nor social protection. Unemployment also grew in the 1990s, a situation that tends to be more serious among women, young people, and the low-income population.[9]

Secondly, jobs in the formal sector have become precarious. In the search for greater competitiveness, large companies in the Region have acted in two ways. They have either reduced their payrolls, leading individuals to seek solutions in the informal sector, or they have introduced labor flexibility, changing hiring methods and amending termination clauses.[10] The consequence of this trend has been the creation of a new type of employment, in the form of nonstandard contracts and unregistered or clandestine jobs. Obviously, the level of social protection for workers in this type of employment is usually very poor in quality or simply nonexistent.

This new form of exclusion is difficult to assess. The trend toward informal employment in the job market in Latin America is determined on the basis of the percentage of

8 ILO - Director General, Trabajo Decente y Protección para Todos. Prioridad de las Américas, 1999.

9 Lustig and Deutsch (1998) state that obvious unemployment harms the poor in particular, in that they do not benefit from specific social protection mechanisms because they are part of the informal market.

10 ILO - V. Tokman and D. Martínez, Inseguridad laboral y competitividad: modalidades de contratación, 1999.

employment in this sector. Obviously, this variable does not mean that all individuals who work in the informal sector are excluded from social protection in health. However, the likelihood of marginalization and social exclusion for this population is higher than in the formal sector.

d. Cultural Accessibility

Cultural accessibility is the fourth and final element discussed in this analysis with respect to problems of accessibility. It refers to *the customs and practices of individuals with respect to health care and self-care and the constraints that these impose on access to services.* This classification may include variables of different types such as the sociosanitary characteristics of various ethnic groups as compared to the total population as well as the use of traditional medicine, healers, and self-medication, and other modalities that should be studied on a complementary basis. Other, more subjective elements, such as distrust of public institutions or ignorance of the principles for anticipating health risks, may also favor social exclusion.

Given that this dimension of exclusion is more qualitative than quantitative, it is difficult to provide a statistical measure of it. In addition, using restrictive and nonexhaustive approximation, we consider the percentage of the population that belongs to ethnic minorities as compared to the total population, recognizing that indigenous peoples have significantly more precarious health conditions than the average population. Although there are significant obstacles to obtaining data that would allow us to adequately assess the health conditions and coverage of the indigenous population, the studies conducted reveal the gap separating them from the standards attained by the rest of the population.

2.4 The Structure and Processes of the Systems

Having analyzed exclusion from social protection in health from the standpoint of coverage and access, the study analyzes the variables that relate to health system structure and processes.

Structure is defined as *the relatively stable characteristics of the health care system* and includes the resources required to supply medical care, including the number, distribution, skills, and experiences of professional staff and equipment in hospitals and other facilities. In the context of this study, only the following variables are included: *physician/inhabitant ratio* and *beds per inhabitant.*

Processes are defined as *the complex chain of activities carried out directly or indirectly while providing health care.* These variables delimit access to health services and are closely related to health outcomes.

The variables of processes relate to the production of health services, as defined by indicators that reflect the profile of the health system in terms of the supply of direct services, such as vaccination coverage and births attended by trained personnel, and indirect services such as drinking water and sewerage systems. Kliksberg links these variables with the concept of "medical indigence" defined as *difficulty in accessing curative and preventive medical services.*

Countries are classified according to a set of variables organized on the basis of an approach that considers structure and processes**.** Each of these variables is studied in all the countries of the Region in order to identify the characteristics of the structure of the health system and the processes developed in this context.

2.5 Profile of the Excluded Population

Faced with the question of who is being excluded, various authors agree that the profile of the excluded includes a series of factors related to age, sex, ethnic group, place of residence, inclusion in the labor force, and income level. For example, Lustig and Deustch (1998) observe that, despite differences between countries, there are general features that make it possible to define a profile of the population that is likely to be poor within Latin America and the Caribbean: head of family who has a low or nonexistent educational level and/or is involved in the informal sector and primary activities or unemployed, extended family groups with numerous dependents, indigenous and black groups, with greater incidence in rural families and greater numbers in marginal urban groups.

Using the different perspectives available for measuring the phenomenon of exclusion in health, it is possible to paint a precise profile of the excluded in each country.

2.6 Limitations of the Study

This study was prepared on the basis of secondary statistical sources and thus reproduces the inconsistencies of the source materials. In addition, the data used to make comparisons among countries refer to the situation at the national level. There are significant differences within a single country that are not taken into account in this study. Finally, the use of variables for a large number of countries means that comparison over time is very difficult, due to the heterogeneity of sources and values collected.

In addition, the inability to produce new quantitative information limited the analysis of the variables associated with exclusion to those variables for which information was available.

Due to these limitations, the work focused on identifying the problems of the excluded population in terms of an overview of the situation in every country of the region. Although a profile of this population is presented, new in-depth studies must be conducted to more accurately determine the magnitude of exclusion and the profile of the excluded. Based on these observations, the findings obtained in this research should be regarded a preliminary effort that merits further study in the future.

III. ESTIMATE OF SOCIAL EXCLUSION IN HEALTH

3.1 First Dimension of Exclusion: Limits on the Scope of Coverage

As indicated in the previous section, the first way to measure exclusion is by analyzing the coverage provided by social protection systems. These systems include several subsystems that seek to obtain protection against the financial effects of disease, old age, and death. They consist of social insurance (pensions, hospital care for occupational risks, maternity, diseases), dependency allowances, social welfare, and national health systems or public programs. Only the health-related elements are considered here.

Coverage and Integration of Health Systems

It is difficult to measure the level of coverage and its corollary, exclusion, because of the complex structure of health systems. To achieve a preliminary classification of the countries, a combination of the variables "social security coverage in health"[11] and "level of integration" is used (Table below).

For the purposes of this analysis, in calculating coverage we consider only the coverage provided by Social Security in Health (S.S.H.) because users of the public subsystem are difficult to identify in the segmented systems (Table 1).

The classification of health systems as integrated or segmented relates to the degree of coordination between subsystems in terms of the supply of services (in cases where there is no single national system). For this reason, Chile has been included among the countries with integrated systems in that although it has two types of well-defined providers in terms of the user profile, these providers operate in an integrated fashion in terms of the distribution of services. In addition, the Brazilian system is considered integrated because public services and social security services are unified. Finally, the Uruguayan and Argentine systems are considered segmented (compared to the Chilean system) due to the separation between financing and supply and, primarily, to the multiplicity of *obras sociales* entities.

This first classification includes four groups of countries with:

- high coverage and high integration (Group 1);
- low coverage and high integration (Group 2);
- high coverage and low integration (Group 3);
- low coverage and low integration (Group 4).

11 We work with statistical theoretical coverage. Difficulties in obtaining real coverage are related to the difference between the proposed objectives of coverage and the population actually provided care, and also the choice made by the user based on the type of service being sought. Maceira, 1996

"High coverage under SSH." means that more than one-third of the total population is covered and "low coverage under SSH." means that 33% of the population or less is covered.

Table 2: Classification of Health Systems According to Coverage by Social Security in Health and the Level of Integration. Latin America and the Caribbean, 1995

		SOCIAL SECURITY COVERAGE	
		HIGH	LOW
INTEGRATION	HIGH	GROUP 1 Brazil Costa Rica Cuba Chile Panama Countries of the Non-Latin Caribbean Subregion Colombia *	GROUP 2 Nicaragua
	LOW	GROUP 3 Argentina Mexico Uruguay Venezuela	GROUP 4 Bolivia Ecuador El Salvador Guatemala Haiti Honduras Paraguay Peru Dom. Republic

* Data from 1998, due to the increase in coverage in connection with Law 100

The countries in Group 1 (high coverage and high integration) would be guaranteeing social protection in health to most of their population from the standpoint of statistical theoretical coverage. However, there are significant differences in terms of access between the countries that have a national health system and the rest of the countries belonging to this group (especially Brazil), as will be noted later on. The non-Latin Caribbean is the most homogeneous region in terms of coverage, which reaches 100% of the population in these countries. This subregion is also the most homogeneous in terms of integration, as all these countries have a national health system based on the British system, thus ensuring the highest level of inclusion in terms of health services coverage in all of Latin America and the Caribbean. Nonetheless, their population represents only 1.3% of the Region's total population and thus, this percentage is not significant within the regional overview of exclusion.

Group 2 (low coverage and high integration) includes Nicaragua. Although there is a close relationship between the public sector and the social security system, the social security system has a merely subsidiary role because the political structure meant that the service delivery modality established was almost totally public.

The countries in Group 3 (high coverage and low integration) include two pioneers in social security (Argentina and Uruguay) and two intermediate-ranking countries that have

nonetheless been using this system for more than 50 years (Mexico and Venezuela). However, within these countries there are significant differences in coverage among the different population groups.

The countries in Group 4 (low coverage and low integration) include countries with limited coverage in basic health services (vaccination, drinking water and sanitation) as analyzed in this study. The segmentation of care is considerable due to economic, cultural, and institutional factors, leaving broad segments of the poor population vulnerable to morbidity and mortality from preventable causes.

Level of Coverage by Social Security in Health

The population without theoretical coverage from social security in health represented **46%** of the total population of Latin America and the Caribbean **in 1996**. In absolute figures, this represents 217,779,000 people who do not have SSH.

The data would seem to indicate a decline in SSH coverage. Based on data from ECLAC, the population not covered by social security was **39% in 1992**[12] (Table 1). Examples of this trend are seen in countries that have experienced a decline in coverage in recent years such as Peru (from 34% to 30%) and Mexico (from 59% to 49%), where a national plan has been implemented to reverse this situation and to cover farmers under social security in health.

Coverage by the Private Sector

Coverage under the private subsystem includes private insurance and NGOs and consists of the services of private physicians, nonprofit private institutions, informal sources of care, and the broad range of delivery modalities that make up the private health care sector (Table 2).

The following considerations were included when conducting this analysis:

- it is likely that the estimated coverage is higher than real coverage;
- there is overlapping of coverage with the public sector;
- when data was missing, the country was excluded from the analysis (e.g., Belize).

Private health insurance plans have different degrees of development within the Region. The countries of the Southern Cone (Argentina, Brazil, and Chile) have a greater percentage of covered population. In addition, private insurance plans are financed in various ways, ranging from wage-based contributions to direct individual or family payments, or payments made by companies.

12 This percentage is affected by the high coverage in Brasil, which includes more than half of the insured, and thus may be under-estimated. In Kliksberg, 1993

In the countries of the non-Latin Caribbean with national health systems (Group 1), private insurance plans are used as supplemental coverage. Only in Jamaica are such plans well developed.

In segmented systems, since social security contributions are compulsory, middle- and high-income patients often prefer to contract for private insurance and obtain access to better service, since their contributions to social security do not result in service. Thus, they become part of the population receiving care only through the private system, with different levels of coverage, premiums, and copayments.

In addition, NGOs become singularly important in countries where the system is segmented and SSH coverage is low, becoming in such cases the principal provider in the private subsystem. In some countries of Group 4 such as Ecuador, Peru, Guatemala, and Guyana, we can see that NGO participation in health care represents between 10% and 20% of coverage. In the remaining countries in this group, coverage ranges from 5% to 10%. In contrast, in most countries with high coverage (groups 1 and 3), NGOs serve less than 1% of the covered population.

Adding up the total coverage provided by social security, private insurance, and NGOs in each country, we see that less than half of the countries show **coverage of 100%.** This figure is higher in some cases due to the overlapping of coverage. For example, dual membership is 9% in Argentina and 20% in Brazil. However, despite this dual membership, Brazil does not achieve 100% coverage.

One-third of the countries in Latin America and the Caribbean have **less than 60%** coverage. These are also the countries with low social security coverage (groups 2 and 4), except for Venezuela, which has high coverage (group 3).

In summary, the number of people not covered by social security amounts to **218 million.** Only some of these people benefit from coverage provided by a public system or the private sector.

3.2 Second Dimension of Exclusion: Accessibility

This second dimension of social exclusion in health is examined from four perspectives: financial, geographical, work-related, and cultural accessibility.

3.2.1. Financial Accessibility

Different variables have been used to estimate the dimensions of exclusion due to financial barriers. These variables include both socioeconomic variables such as income and the poverty line and structural variables such as public expenditure and private expenditure per capita in health.

Private Expenditure

According to the methodology developed below, the first variable used is "private health expenditure." Health expenditure is related to income and allows us to evaluate the financial access of individuals to health services or to social protection. Private expenditure consists of direct expenses, also known as out-of-pocket expenses, and indirect expenses. Direct expenses include household spending to purchase health goods and services. Indirect expenditure refers to household spending and company outlays for private health insurance or prepaid medical plans.

Most of the estimates of direct household expenditure were obtained from income and expenditure surveys or household budget surveys (estimated on the demand side) and refer specifically to spending on goods and services related to health recovery: visits to physicians and paramedical personnel, drugs and pharmaceutical products, hospitalization and diagnostic services, and other types of medical services.

As information broken down into direct and indirect private expenditure is not available for all the countries studied, the analysis below considered the variable "total private expenditure" equivalent to private out-of-pocket expenditure.

This approximation is possible because indirect expenditure is significant only in Brazil and Argentina, where it represents 46% and 42%, respectively, of total private health expenditure. In the remaining countries, indirect expenditure is considerably lower and in most of these countries it represents less than 5% of total private expenditure.

We see a broad range in the countries of Latin America and the Caribbean for **total per capita private expenditure**, with extremes for **Haiti at US$6 per year** and **Argentina at US$436 per year** (Table 3). When calculating the averages for per capita private expenditure by subregion, we see that Central America and the Latin Caribbean are the subregions with the lowest per capita private expenditure, with values below US$100 in all cases. At the other extreme, due to the types of health systems in effect, we have the Southern Cone subregion (Graph I), with values ranging from US$56 for Paraguay to US$436 for Argentina.

The average per capita private expenditure is US$91. However, this falls to US$80 if Argentina is excluded from the analysis, because its private expenditure is more than twice that of the next highest country (the Bahamas).

The relative importance of private health expenditure is consistent with the limited participation of public sector expenditure in the direct supply of health services (through the ministries of health) and with the fact that less than one-fourth of the population is *protected by compulsory health insurance schemes.*

Distribution of Private Expenditure

To refine the analysis, if we link private health expenditure and the country's average per capita income, we can obtain a rate that expresses the relative impact of health spending on each country's average income (Graph IV and Table 3). When we analyze this indicator by income quintiles, we see that the annual income in the poorest population segments is not sufficient to cover the country's average per capita private expenditure, whereas in the upper-income segments there are many cases where average per capita private expenditure represents only a small percentage of annual income.

Clearly, private expenditure represents a higher percentage of income for groups in the first quintile (low income). Income in both quintiles is compared to provide an idea of equity in the distribution of income in the different countries in the study (Table 4). Graph IV indicates that at present the country with the greatest inequity in income is Brazil, followed by Panama and Guatemala. We find Jamaica and Bolivia at the other extreme, with the smallest difference between the incomes of the first and fifth quintiles.

One of the major constraints we face when conducting this analysis is the lack of information on several countries of the Region, which makes it impossible to arrive at in-depth conclusions.

The lower the country's income level, the greater the relative weight of private expenditure as a percentage of national health expenditure. Although health expenditure is low in poor countries, private sector participation accounts for a larger percentage of GDP than public sector participation, and private spending on health tends to increase the lower the level of economic development. In this context, out-of-pocket expenditure acts as the principal method for contracting private services.

The Poverty Line

Another criterion for analysis that can help us to calculate the population affected by financial constraints to access (Table 5) is the "population living below the poverty line." The size of the population living below this line is sometimes calculated as the population with income below US$2 per day or US$730 per year. Using a standard criterion developed on the basis of expert opinion, it was determined that at least 10% of the population's income is allocated to health expenditure. Thus, people below the poverty line would be spending a maximum of US$73 per year on health, a figure that is much lower than the regional average of US$91.

As graph V indicates, in approximately half of the countries in question, the poorest people in the population cannot spend US$73 because of their limited resources. This demonstrates a significant financial constraint on access to health services, particularly in Haiti, Central America (Honduras, Guatemala, Nicaragua, Panama), in Brazil, and in Bolivia, all of which are countries where a high percentage of the population lives below the poverty line.

However, in countries such as Bolivia, Ecuador, Nicaragua, and Haiti 10% of first quintile income is higher than per capita national health expenditure. This would indicate that income in this quintile is sufficient to afford access to health services. In comparison with national health expenditure, we see that in 10 of the 17 countries for which data on per capita income in the first quintile are available, 10% of income in this quintile is less than per capita health expenditure and is not sufficient to cover the minimum investment in health.

Summarizing, in terms of financial inaccessibility, it can be estimated that about 121 million people in the region face (table 5) financial barriers to access to health services, although there are significant differences among the subregions, particularly in Central America (with the exception of Costa Rica) where the percentage of the population living below the poverty line is more than 30% of the national population

3.2.2 Geographical Accessibility

To define geographical accessibility, we use the UNDP's (1997) definition of access to health services, that is, "the percentage of the population that can obtain local health services, with no more than one hour's travel on foot or by local means of transportation".

Based on this definition, those who suffer from problems of geographical access amounted to **107 million** people in 1997 (Table 6).

Two types of populations are particularly affected by problems of geographical inaccessibility: rural populations and periurban populations in the Region's large cities, where there are no health services or services are low in quality or limited to primary care.

According to the specialized bibliography, the rural population has lower levels of health coverage than the urban population and is one of the groups most vulnerable to exclusion from social protection systems in health. Based on the available statistical information, there are about 125.480 million inhabitants in rural areas who are likely to experience constraints on their access to health services for various reasons.

First, rural workers often belong only to the informal sector. Thus, they do not have health insurance, and their only option is to use the public subsystem, which is plagued by significant deficiencies in these countries.

Secondly, most rural populations live in poverty and thus encounter financial barriers hindering access to services. Even when services are free, as in the case of the public sector, they involve some expense on the part of the user.

Thirdly, based on the correlation established between the two variables, this population group suffers from limited geographical access. Other than in Peru, the rural population and the population affected by geographical barriers represents between 30% and 66% of the population in the countries in Group 4, with their characteristic low integration and low coverage.

Finally, about one-third of the rural population in the Region is indigenous and thus affected by cultural barriers, an issue that will be examined later.

Analysis of the data indicates that geographical constraints on access are higher in the countries of Group 4, where more than 30% of the population is affected (with the exception of Ecuador and the Dominican Republic).

With respect to the distribution of this population, there is a high correlation between the relative percentage of the rural population and lack of access to health services due to geographical barriers, especially in countries with segmented health systems (Graph II).

It should be pointed out that, although the non-Latin Caribbean countries have a high percentage of rural population national health systems, they have implemented strategies to expand coverage. Accordingly, despite the lack of information on geographical access in the countries of this subregion, we can deduce from the characteristics of the health system (integrated and with high coverage) that they do not have significant problems in this area.

No information is available on geographical accessibility in Brazil and Venezuela; thus, it was estimated on the basis of the rural population. Given the importance of these two countries, this simplified estimate[13] was calculated so as not to underestimate the total numbers of the excluded at the regional level. In addition, the recorded supply of services would indicate that there are geographical constraints on access in these countries.

In summary, **22% of the total** population of Latin America and the Caribbean, or about **107 million people,** are without access to health services due to geographical barriers according to the UNDP definition.

3.2.3 Work-Related Accessibility

A third way to approximate exclusion is on the basis of the worker's situation, which affects the level of protection and thus his situation in terms of exclusion.

For some years profound changes have been under way in the structure of the labor and employment markets in Latin America and the Caribbean[14].

13 Noting that the trend line between geographic inaccessibility and rural population reflects the formula: Y =1.19X for R2 = 0.8, we estimate, given the limitions of the situation, that geographic inaccessibility is 26 % for Brazil and 17 % for Venezuela.

14 ILO, *Panorama Laboral*, 1998, 1999.

During the first six months of 1999, the average rate of unemployment in the Region was 9.1%, despite reductions in Mexico and Panama and stabilization in Brazil in comparison with the previous year. This means that 18 million people living in urban areas in Latin America and the Caribbean are currently unemployed. ILO projections indicate that the employment situation will deteriorate in the second half of 1999 due to the recession in the economies of the countries of the Region. In addition, women have been the first to be affected when they lose their right to social security as formal workers. Indeed, in the first half of 1999, the unemployment rate for men was 8.2% versus 10.2% for women.

This situation has been exacerbated by two of the labor market's structural elements. First, the informal sector of the economy is growing in most of the countries. Secondly, jobs in the formal sector have tended to become precarious due to the increasing practice of hiring workers "under the table" and changes in hiring clauses.

According to Table 17, 57.7% of the jobs in Latin America and the Caribbean in 1997 were in the informal sector of the economy versus 51.8% in 1990. Nonetheless, in some countries this percentage has remained stable or the formal sector percentage has increased, as in the case of Ecuador, Bolivia, and Colombia.

It is difficult to estimate solely on the basis of this indicator the real number of the excluded who are affected by conditions in the job market due to the wide variety in types of informal employment. Nonetheless, this indicator is useful because workers in this sector, or at least some of them, are excluded from social security systems and also because some categories of the population who do have resources do not participate in national solidarity, weakening the social security institutions in their public service mission.

It is very important to point out that the labor market trends do not indicate that significant numbers of workers will be added to social security systems in upcoming years; the situation will not change unless specific measures are taken in this regard.

3.2.4 Cultural Accessibility

The final measure of social exclusion in health, based on access to health services, relates to the cultural characteristics of individuals. This study analyzed two variables, ethnic origin and the use of traditional medicine. There are other important aspects such as the welfare culture, the health culture, and educational level. However, these aspects do not fall within the scope of this study.

Due to the lack of information, the analysis of cultural access will consider only the data on the "*indigenous population"* while recognizing that not all indigenous groups suffer from cultural barriers hindering access to health services and that there are other groups that suffer from barriers of this type.

The first variable to be analyzed is the percentage of the indigenous population in each country. The selection of this group to identify cultural barriers to access is not justified on the basis of its status as an ethnic minority as such but rather on the likelihood that this

ethnicity is associated with unfavorable socioeconomic and health conditions and problems of geographical access that make these populations particularly vulnerable. There is actually no precise information available on the health status of the indigenous populations or on health system coverage for this group. Nevertheless, it can be stated that the health conditions of ethnic minorities exhibit a level of deterioration that is higher than the average for the general population.

When examining the indigenous population, we note that the countries with higher percentages of indigenous peoples among the total population are the countries with lower social security coverage in health and greater constraints in terms of geographical accessibility, based on the analysis up to this point (countries in Group 4).

Mexico is the exception and does not share the above-mentioned characteristics, because, among other reasons, only 14% of its population is indigenous, although this does involve a significant number of people (12 million).

The second variable to be considered with respect to cultural accessibility refers to *"informal coverage modalities."* Based on the studies conducted, there is a high correlation between the presence of indigenous or Afro-American populations and the use of health services from informal sources, especially traditional medicine.

Given the importance of these practices, some countries such as Bolivia and Haiti have made efforts to regulate traditional medicine and to coordinate it with public medicine.

3.3 Third Dimension of Exclusion: Structure and Process

3.3.1 Structure

As indicated earlier, structure is defined as *the relatively stable characteristics of the health care system* and includes the resources needed to supply medical care, which entails the number, distribution, skills, and experience of professional staff and equipment in hospitals and other facilities. This dimension will be evaluated on the basis of the variables *physician per inhabitant* and *beds per inhabitant.*

Medical Services

The number of inhabitants per physician in the Latin American and Caribbean countries varies widely (Table 7), with the extremes found in Cuba (231 inhabitants per physician) and Haiti (12,048 inhabitants per physician). Using the standard of one physician for every 1,000 inhabitants as a basis, we can basically distinguish two groups of countries: those with a surplus and those with a shortage.

This figure does not by itself establish the existence of a surplus or shortage in a given country, but it does indicate whether the supply of physicians in the country is adequate to meet the needs and whether there are structural obstacles to medical care. However, there may be situations within countries that are associated with an uneven distribution of human

resources.[15] Naturally, this indicator underestimates exclusion if we consider that the concept of health that is used goes beyond the mere lack of disease--a status with which medical professionals are most associated.

The optimum number of physicians needed to cover a given population depends, among other variables, on whether the coverage is integrated or segmented. We note that the countries that invest efficiently and effectively in public health require fewer physicians for every 1,000 inhabitants. This is true in the Caribbean countries that have public systems providing broad coverage. If we were to consider only the number of inhabitants per physician, these countries would show a shortage in the medical supply as compared to the proposed standard. However, this is not true in practice because of the characteristics of the system.

The situation is different in countries with segmented systems, even when broad coverage is provided, as in Argentina or Uruguay. Although inhabitants per physician rates are significantly lower than the standard, this "excess coverage" has different effects on health services. For example, in Argentina there are differences related to geographical distribution and ability to unionize by region.

One way to analyze the relationship between the number of inhabitants and the number of physicians is to determine public and private expenditure as a percentage of total health expenditure. Thus, the number of physicians should be tied to the ratio between public sector expenditure and private sector expenditure.

We note that countries with weak public sectors provide more deficient health services, leading to a gap in care that becomes apparent not only in the lack of coverage or access to services but also in the quality of services.

If we consider that for all of America (including North America) the average ratio between public and private expenditure is 0.69, one in every four countries in Latin America and the Caribbean is below that average. This means that private expenditure predominates in the composition of expenditure. This same phenomenon is seen in all countries with a ratio of less than 1, despite being above the average for the Americas. Using a maximum hypothesis, we calculate the entire population that would remain without medical care due to the shortage in this resource (Table 8). However, we should not overlook the investment made by the public system (Graph III), as health promotion and protection activities energetically carried out by the State modify the indicator in the sense that they reduce the need for medical care.

Accordingly, we make an adjustment to this variable by relating public-private expenditure to the number of physicians. In graphic terms, if we exclude the two extremes (Haiti and Cuba), there are four quadrants:

I. Shortage of physicians with low public/private expenditure ratio

15 Even though the number of physicians per inhabitant is adequate nationally, the distribution between urban and rural sectors is uneven at a rate of 5 to 1.

II. Shortage of physicians with high public/private expenditure ratio

III. Surplus of physicians with low public/private expenditure ratio

IV. Surplus of physicians with high public/private expenditure ratio

The countries in the first quadrant are those with the worst conditions, because they have a shortage of physicians and a very low public/private expenditure ratio. We calculate the population affected by the shortage of supply in these countries, and then add Guyana where the physician-to-inhabitant ratio is more than 4 times below the reference value.

We can see that the first quadrant includes most of the countries initially classified as Group 4 (low coverage and low integration) such as Haiti, El Salvador, Guatemala, Honduras, and Paraguay. Up to this point, these countries show the least adequate values for each variable analyzed.

Although the countries in the second quadrant have a shortage of professionals, this is offset because they have highly integrated systems, as described earlier with respect to the non-Latin Caribbean countries with national health systems. In this quadrant, in addition to Guyana, which was included in the first group, we find two more countries (Bolivia and Nicaragua). While their shortage is not as serious as in the previous quadrant, they are in a transitional phase in terms of this indicator because they have low coverage; this situation is exacerbated in Bolivia because it also has a segmented system.

For the countries with a surplus, given the similarity in the physician-to-inhabitant ratio, we could deduce that this supply is better distributed with respect to the different population groups in countries where the public-to-private expenditure ratio is higher.

This generally means that the relative importance of physician supply in each country depends on the type of system and State investment in public health.

In short, this indicator shows that **23 million people** may be affected by a shortage of physicians in countries that have problems of this type (quadrants I and II).

Inpatient Services

The second type of variable used to evaluate the structure of the supply of medical services refers to inpatient services. These variables are important because they provide an indication of the system's ability to respond to the demand for medical care and an indication of problems in accessing the services. To analyze inpatient services, we select the variable *"supply of beds."* The indicator is obtained by multiplying shortfall in the number of beds by the standard number of beds needed per inhabitant (5 beds for every 1,000 inhabitants).

The countries are divided into three groups: those with an adequate supply, those with a surplus, and those with a shortage.

The countries of Latin America and the Caribbean provide more beds than the standard in only 12% of all countries selected, and these include only countries with universal systems (Table 9). The highest bed shortage based on the standard is seen in Mexico and the Central American subregion (36% of the total). The lowest shortage is recorded in Cuba and in the Caribbean subregion (1%). The Andean region (28%) and the Southern Cone (32%) together account for 60% of the shortage of beds in the Region (Table 10).

There is not enough information available for an in-depth analysis of the inequities in each country. However, other studies estimate that the distribution of beds between urban and rural areas is 4 to 1, demonstrating the magnitude of existing differences.

As an overall number for each country, the variable examined and its comparison with the standard is not enough to determine the dimensions of exclusion, because exclusion is highly affected by the geographical distribution of resources within a country. Nevertheless, it does afford an overall idea of the number of people affected by the shortages in each country, setting aside problems of geographical inaccessibility.

This indicator emphasizes deficiencies in the health infrastructure (in terms of hospital beds). In effect, more than 70% of the population in Central America (Guatemala, Honduras, Nicaragua), the Andean countries (Peru, Colombia, Venezuela), Paraguay, the Dominican Republic, and Haiti has problems securing access, and based on this indicator, would be excluded—at least partially—from health services. This exclusion may take the form of long waiting periods to receive care, discrimination associated with the ability to pay, or total exclusion from hospitalization. It is clear that this synthetic indicator, based on a universal standard (5 beds for every 1,000 inhabitants), does not take into account the specific characteristics of the Region's health sectors and the fact that they can perceptibly distort the results.

To summarize, in 1996 267 million people, or 55% of the population in the Americas, may have suffered from exclusion based on a shortage of beds in inpatient services. The two extremes in the Region are found in the Caribbean. In Haiti, the population theoretically affected by this problem amounts to 86% and in the English-speaking countries of the Caribbean, there is a surplus of beds in inpatient services.

3.3.2 Processes

The second and final type of variable used to measure exclusion reflects the profile of the health system based on the supply of direct services such as vaccination coverage and births attended by trained personnel, and indirect services such as drinking water and sewerage systems.[16]

Direct processes are reflected here in:

16 Kliksberg links these variables with the concept of "medical indigence" defined as difficulty in obtaining access to curative and preventive services.

- *births attended by trained staff*, defined as the percentage of recorded births that were attended by health workers trained for this purpose.

- *gap in immunization coverage***,** understood as the difference between the percentage of children vaccinated with BCG and the percentage of children vaccinated against measles, as these are the vaccines that respectively begin and end the immunization cycle for children under the age of 1. In this case, we also studied the existing gap between the percentage of children under the age of 1 who were vaccinated with BGC and the percentage of children who were given the vaccine at a lower rate of coverage in each country.

The variables representing the indirect processes are:

- *access to drinking water*, defined as the percentage of the population that has reasonable access to a water supply suitable for human consumption; and

- *access to sewerage systems***,** understood as the percentage of the population that has reasonable access to sanitary methods for excreta disposal.

The close relationship between the variables representing the indirect processes is recognized. Thus, a third variable is considered:

- the highest percentage of the population affected by a lack of access to drinking water or sewerage services.

Births Attended by Trained Staff

This type of service is absolutely basic, and the research group feels that a woman who does not seek out the health services for care in childbirth is a woman suffering from exclusion, regardless of the cause. A woman who does not come to the health system to give birth is part of a community, and there are other people like her who are also unable to attend to their health problems within the system. In this respect, we can assume that the percentage of births occurring outside the system, compared to the number of births in the general population of a given country, can be extrapolated to that population in order to determine the size of the population that is excluded.

This figure allows us to infer what population is excluded from all health services. The number of births not attended by suitable or trained staff is obtained by subtracting the births attended by trained staff from total births.

The percentage of people excluded, obtained from the percentage of births not attended by trained staff, is calculated as follows:

5. The percentage of births attended by trained staff is calculated first.

6. Then, because the number of live births is known, the number of children who correspond to those births can be calculated.

7. Finally, the percentage of the country's total population that represents live births not attended by trained staff is calculated.

Graph VIII and Table 11 show three major differences among the countries and a certain regression in the phenomenon of exclusion in health (based on that criterion) between 1985 and 1996.[17] In effect, in some countries such as Colombia, Ecuador, El Salvador, and Haiti there was a reduction in the rate of births not attended by specialized staff, compared to Honduras, Paraguay, or Peru, where the reduction was less pronounced and the rate significant (44% or more). The efforts made by various countries in the Region to provide coverage to the population during the last decade should be emphasized. However, the situation continues to be very serious, since this indicator demonstrates the lack of coverage in absolutely essential health services and the population involved is still extremely large.

It should be pointed out that there is possibly another type of exclusion from medical services that are more sophisticated than care in childbirth. However, these cannot be measured with the available information. It bears repeating that the gap is significantly wider in countries classified as having low integration and low coverage in the table that begins this study.

In short, the percentage of births not attended by trained staff rose in 1996 to **17% of the population** of Latin America and the Caribbean. This translates into **83 million women excluded**. It should be emphasized that this number is probably very close to the real number of the excluded and represents the population that is unable to access any type of health services, for any of the reasons we have stated. The two extremes are the countries of the English-speaking Caribbean, with a rate of exclusion close to 0, and Bolivia, with a 72% rate of exclusion.

Immunization of Children under 1 Year of Age[18]

UNICEF suggests that immunization is the best health investment in the world because it requires only US$15 to protect each child. UNICEF encourages governments to allocate more resources to gathering information on this subject.

In this context, the gap in immunization schedule coverage for children under 1 year of age is studied in order to identify the total population excluded from social protection in health on the basis of that variable (Tables 12 and 13). This gap indicates a deficiency in primary care. The results obtained for this variable may not precisely represent the phenomenon of exclusion at the national level if specific vaccination programs have been launched.

The number of live births represented by that gap is determined first. Then, those live births are compared to the total population, calculating the percentage of live births with respect

17 Sources: PAHO and IDB

18 Due to a lack of data on BCG vaccination coverage, the following countries are excluded from this analysis: Antigua and Barbuda, the Bahamas, Barbados, Suriname and Trinidad Tobago.

to the total population. Finally, live births without immunization schedule coverage are compared to the total population.

The methodology applied uses the following steps:

1. the gap between the percentage of those vaccinated with BCG and the percentage of those vaccinated against measles, or the vaccine that shows the lowest coverage, is determined;

2. the percentage by which coverage fell in comparative terms is determined, if 100% of BCG coverage is considered;

3. the percentage of the population represented by live births resulting from calculation of the gap is determined.

It is thus possible to determine the percentage of the population excluded from primary health care systems.

Using the indicator for immunization of children under the age of 1, we arrive at an estimated exclusion of 16.4% of the population. The coincidence with the figures for excluded births (17%) within the system is striking, as both indicators are associated with access to basic health services.

In the analysis by country (Table 13), there are major differences in terms of vaccination and, accordingly, in the numbers of people excluded. Thus, in general terms, countries with limited integration (groups 3 and 4) have higher rates than other countries. This is true of Ecuador, Guatemala, Paraguay, Mexico, Venezuela, Argentina, and Uruguay, with the excluded representing 15% of the total population. In addition, certain countries such as Peru and El Salvador record rates below 5% based on interventionist policies in that area. A rate below 7% of total population is seen in the countries of the non-Latin Caribbean, Costa Rica, Chile, and Panama.

In summary, based on the analysis of immunization for children under the age of 1, it is estimated that about **81 million people,** or **16.4% of the Region's population, suffer from exclusion.** The two extremes are the non-Latin Caribbean, where virtually no exclusions are recorded, and Venezuela, with a rate of exclusion of 38% of the total population, in terms of this indicator.

Drinking Water and Sewerage Systems

In analyzing the variables for indirect processes, the literature considers access to drinking water and sewerage services to be one of the basic indicators, given their importance to the health of the population.

A large group of countries in Latin America and the Caribbean exhibits serious deficiencies in terms of the distribution of these services, particularly some of the countries classified in Group 4 (low coverage and low integration).

According to Table 14, the population of the Region without access to drinking water services is 26.5% of the total population and the population without access to sewerage services is 30.2% of the total population. There are significant differences among the countries. In Haiti, Guyana, Paraguay, Nicaragua, Belize, and Bolivia more than one out of every two people is without access to drinking water or sewerage service, whereas in the countries of the non-Latin Caribbean and Chile, Cuba, and Costa Rica less than the 15% of the population is excluded from these basic services.

In summary, when we select the higher number for the population without access to either of these two services (drinking water or sewerage services), the percentage is **32.1% of the population**. This percentage is 0% in most countries of the English-speaking Caribbean and more than 70% of the population in Haiti. This means that **152,675,000 inhabitants** of Latin America and the Caribbean are without access to these services, with the costs that this represents for their health conditions.

3.4 Profile of the Excluded Population

In order to complete the findings presented up to this point in the study, it is important to answer the question: Who are the excluded? For this purpose, elements from studies already presented and complementary sources will be used.[19]

According to the study, seven categories of groups subject to exclusion have been identified: the poor, the elderly, women and children, ethnic groups, temporary workers, the unemployed and underemployed, and the rural population.

It is important to point out that the characteristics of these groups often overlap (e.g., elderly, poor, and indigenous). It should also be noted that the identification of a specifically excluded group within a country does not mean that this group is large but that it is more vulnerable to exclusion than the average population.

In addition, although the profile of the groups excluded is consistent with the analysis of policies to extend social protection in health (Table 15), the relative weight for each group in the various countries is different, since we are speaking, in principle, of the gap between legal and statistical coverage, in addition to the methodological peculiarities of each study.

Inaccessibility for financial reasons or associated with poverty is significant in Haiti, Bolivia, Guatemala, Honduras and Nicaragua. According to ECLAC, the population affected by poverty remained was about 200 million people between 1990 and 1997, reflecting a reduction in the percentage of this population during this period.[20] There are significant differences among the countries. For example, in Honduras or El Salvador the rates have remained stable while in Mexico and Venezuela the situation has deteriorated.

19 Análisis comparado de las politicas de la extensión de la protección social en salud a los grupos excluidos de América Latina y el Caribe, Isalud, 1999.

20 CEPAL, Panorama Social, 1998.

A 1998 survey conducted by the Isalud Foundation shows that the elderly, women, and children are the populations that are particularly vulnerable and excluded from health systems. This is particularly true for women and children in Colombia, Ecuador, Peru, Paraguay, Uruguay, Brazil, Belize, El Salvador, Guatemala, Mexico, Haiti, Guyana, and Suriname. The exclusion experienced by these groups is related to other factors.

In terms of employment, the growth of the informal sector in most Latin American economies creates new population groups vulnerable to the risk of exclusion. Temporary workers were identified as particularly vulnerable in Argentina and Uruguay, in most Andean countries (except Colombia), in Costa Rica (where there are agreements among unions in the informal sector to implement integration mechanisms), in Guatemala, Panama, Mexico, and the Dominican Republic. The precariousness and poor quality of jobs in the formal sector also add to the segment of the population that is unable to adequately protect itself against the risk of disease. The lack of unemployment insurance in almost all countries of the Region exacerbates this situation.

Finally, the factors leading to exclusion such as poverty, employment in the informal sector, or belonging to an indigenous group have a stronger impact in the rural environment. In rural areas, the population tends to suffer from a shortage in the supply of health services and consequently from geographical inaccessibility.

IV. CONCLUSIONS

The conclusions of this study seek to identify the scope and levels of exclusion in terms of the size of the population affected under each variable selected, as presented in the Summary Table of Indicators. The methodology was organized around three complementary approaches so as to consider the multidimensional nature of the phenomenon. The objective is to measure exclusion from social protection in health from different perspectives, considering the characteristics of the health systems in the groups of countries that make up the Region. These approaches are Coverage, Access, Structure, and Processes.

The first dimension of the analysis reflects exclusion from coverage in health, for which it was necessary to consider only social security coverage in health. This does not represent coverage under the system as a whole, as we are examining only one of the three subsystems that make up the system. However, it is striking that 217 million people in the Region are without social security coverage and their medical care needs thus depend on mechanisms that finance supply within the public sector.

The second dimension refers to the existence of financial, geographical, work-related, and cultural barriers. In the case of financial accessibility, it can be shown that the population living below the poverty line, or 121 million people, is clearly unable to obtain access to different levels of the health services. Geographical barriers were measured on the basis of information published by the UNDP, and we noted a close connection between geographical inaccessibility and the percentage of the rural population living in the various countries. Those affected by this type of inaccessibility have been estimated at 107 million.

The third dimension used variables related to structures and processes. In our view, it is this dimension that comes closest to the reality. Based on the fact that 17% of births were not attended by trained staff, it has been estimated that more than 83 million people are excluded from access to health care. Using the vaccination rate for children under 1 year of age, we estimate an excluded population of close to 82 million people. In addition, it has been estimated that 152 million people are without access to drinking water and/or sewerage systems.

Table 3: Summary of Exclusion from Social Protection in Health

Variables studied	Reference year	Excluded population %	Excluded population in thousands
Coverage			
Population without health insurance coverage	1995	46	217,779
Accessibility			
Financial inaccessibility	1989-1994	27	121,245
Geographical inaccessibility	1995	22.2	107,013
Cultural Inaccessibility	1992-1993	8.8	39,932
Structure			
Shortage in the supply of all medical services	1997	4.8	23,643
Shortage of adjusted medical services	1997	3.2	15,661
Shortage in the supply of beds	1996	55.3	267,537
Processes			
Births not attended by trained staff	1996	17	83,558
Percentage drop-out between BCG vaccination and vaccination with lowest percentage coverage	1998	16.4	81,682
Population without access to drinking water and/or sewerage services	1995	32.1	152,675

Regardless of the method of analysis used, the scope of exclusion from social protection in health in Latin America and the Caribbean is considerable. This intolerable reality on the eve of the 21st century requires urgent efforts on the part of the major national and international actors.

In this regard, it is recommended that study of the excluded population move ahead, basically examining the following three areas of research:

1. the existing inequalities within each country in terms of the characteristics of supply and demand in the different regions;

2. the scope of exclusion in each population group and specific alternatives to be implemented based on the gender, age, ethnic, work-related, and residential parameters proposed in the theoretical framework of this study;

3. the characteristics of supply in the health system, broken down by levels of care, with respect to barriers to access at each of these levels;

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ANNEX

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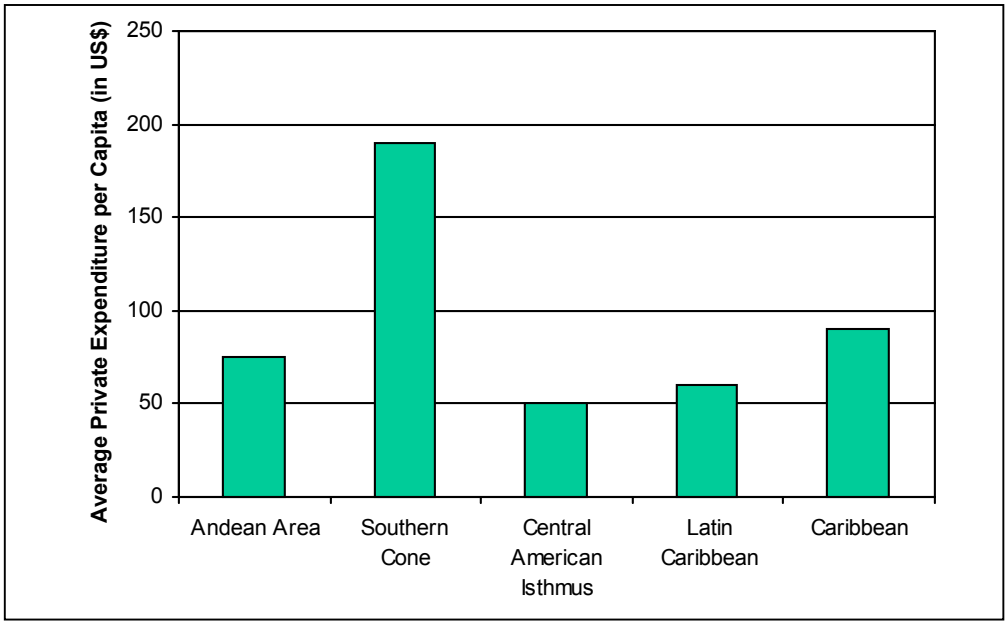
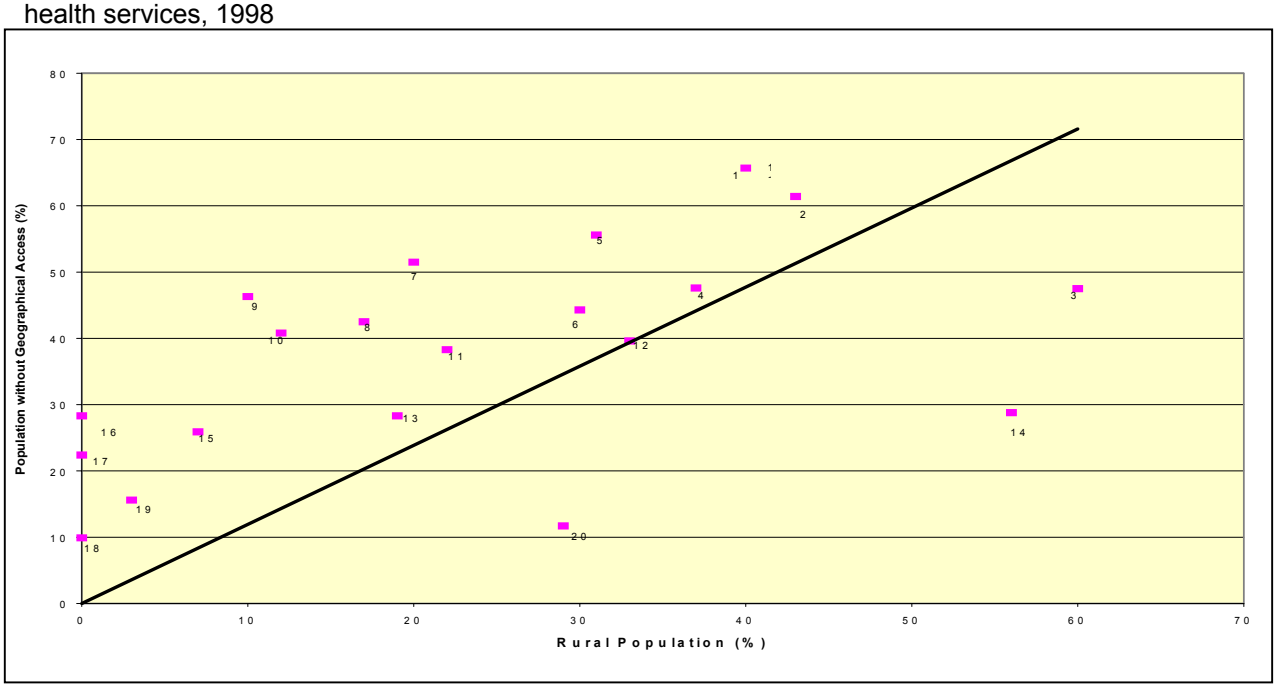


Graph II: Ratio between percentage of rural population and population without geographic access to health services, 1998



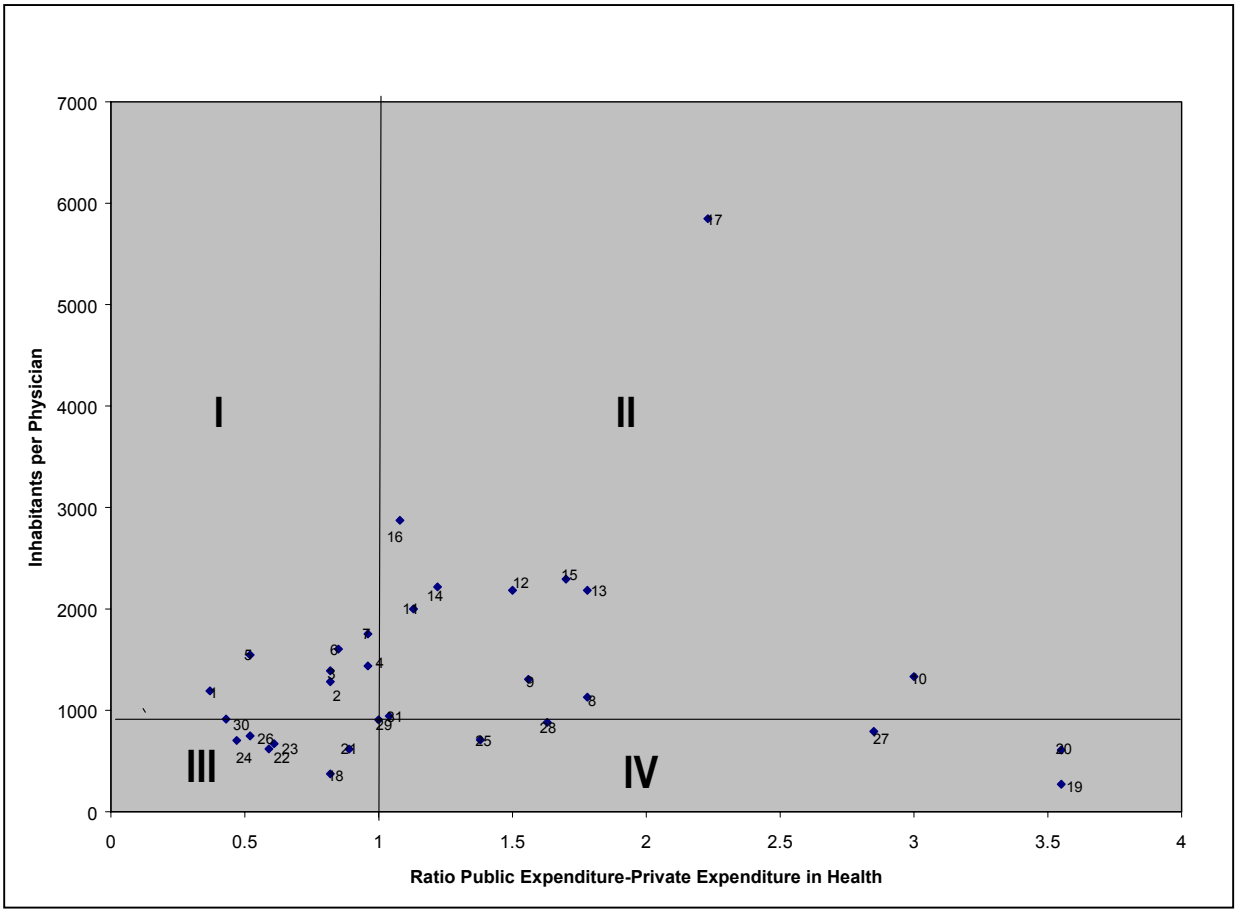
Source: The data on geographical inaccessibility are from the UNDP, except for Brazil and Venezuela, which prepared their own data.
Rural population was calculated on the basis of the data on the urban population, (1995).

* The definition of the term urban is the definition used in each country. Statistical Yearbook of Latin America and the Caribbean ECLAC 1998.

References

1	Haiti	11	Dominican Republic
2	Guatemala	12	Bolivia
3	El Salvador	13	Colombia
4	Paraguay	14	Peru
5	Honduras	15	Mexico
6	Panama	16	Trinidad and Tobago
7	Costa Rica	17	Cuba
8	Nicaragua	18	Uruguay
9	Jamaica	19	Chile
10	Ecuador	20	Argentina

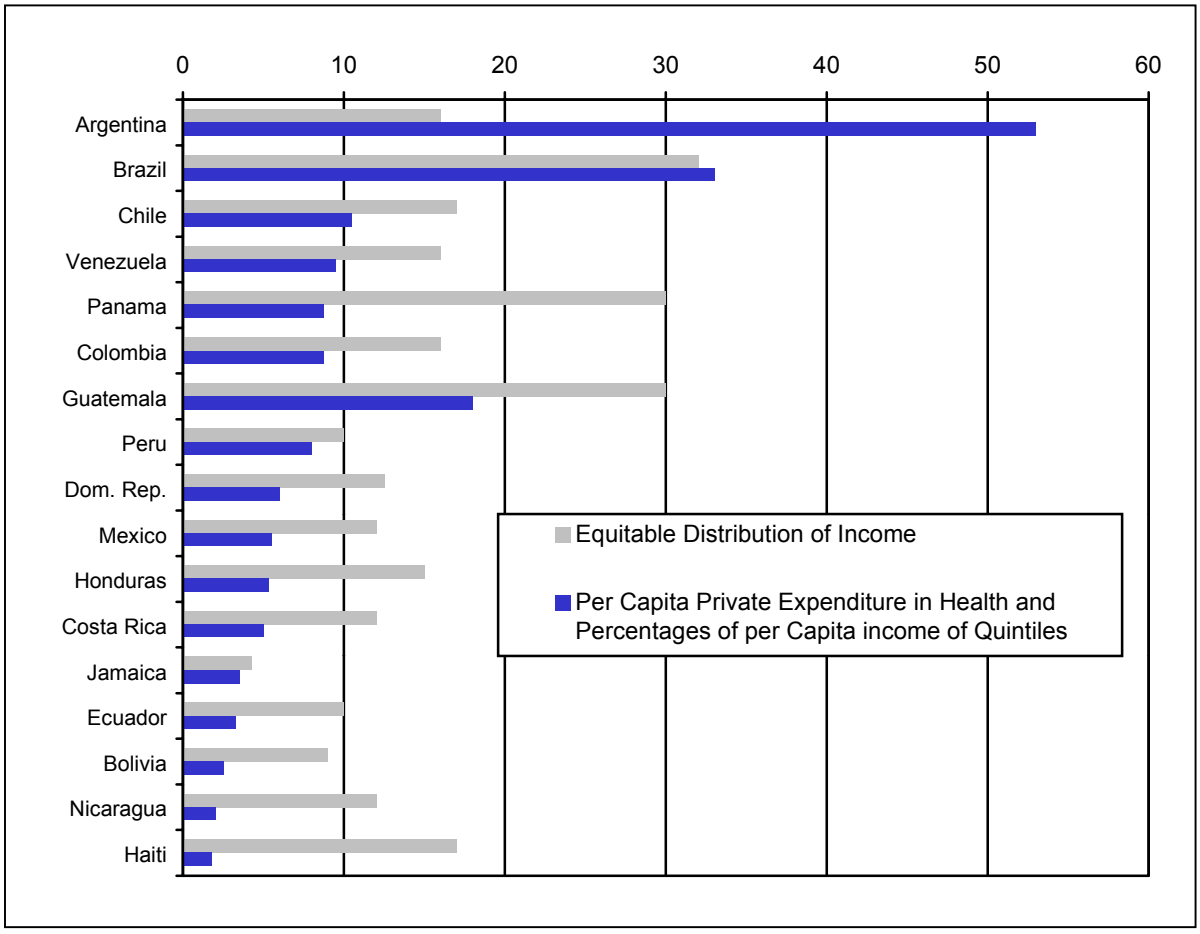
Graph III: Percentage of physicians in terms of public and private expenditure in 1997



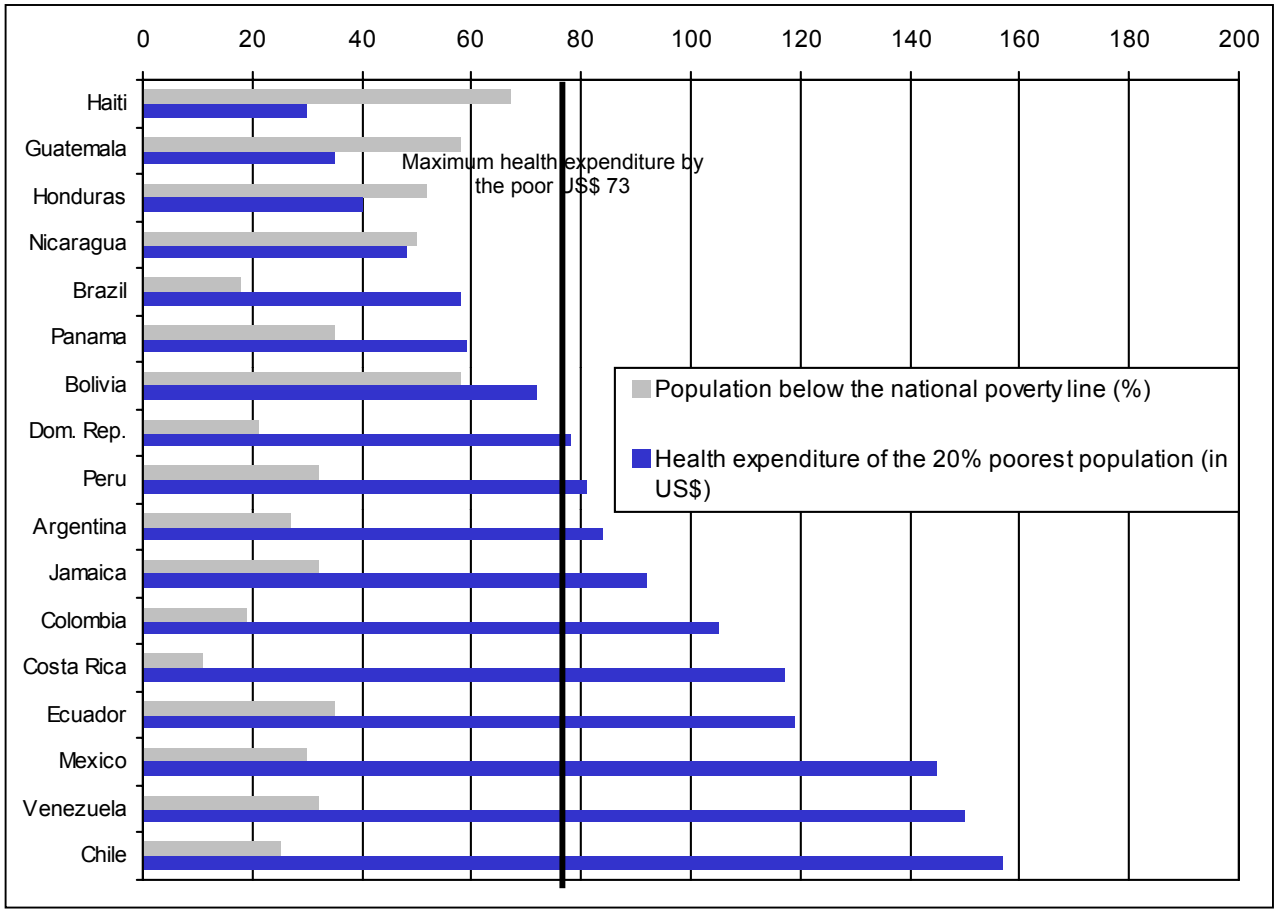
References

1	El Salvador	11	Grenada	21	Mexico
2	Guatemala	12	Dominica	22	Venezuela
3	Trinidad and Tobago	13	Saint Vincent and the Grenadines	23	Dominican Republic
4	Honduras	14	Bolivia	24	Ecuador
5	Paraguay	15	Nicaragua	25	Bahamas
6	Belize	16	Saint Lucia	26	Brazil
7	Jamaica	17	Guyana	27	Costa Rica
8	Saint Kitts and Nevis	18	Argentina	28	Barbados
9	Antigua and Barbuda	19	Uruguay	29	Chile
10	Suriname	20	Panama	30	Colombia
				31	Peru

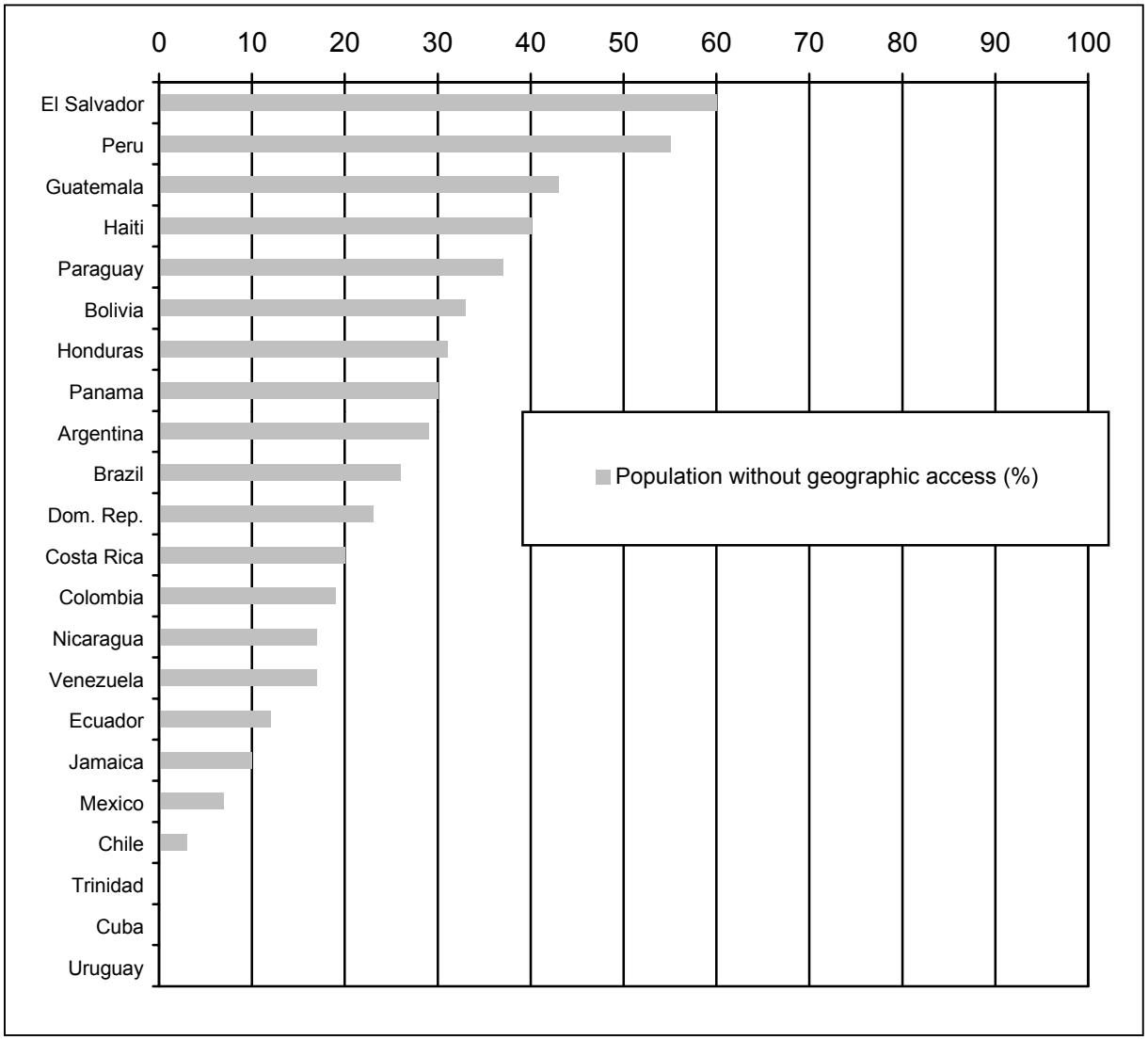
Graph IV. Private health expenditure and average income in Latin America and the Caribbean, 1980-1994



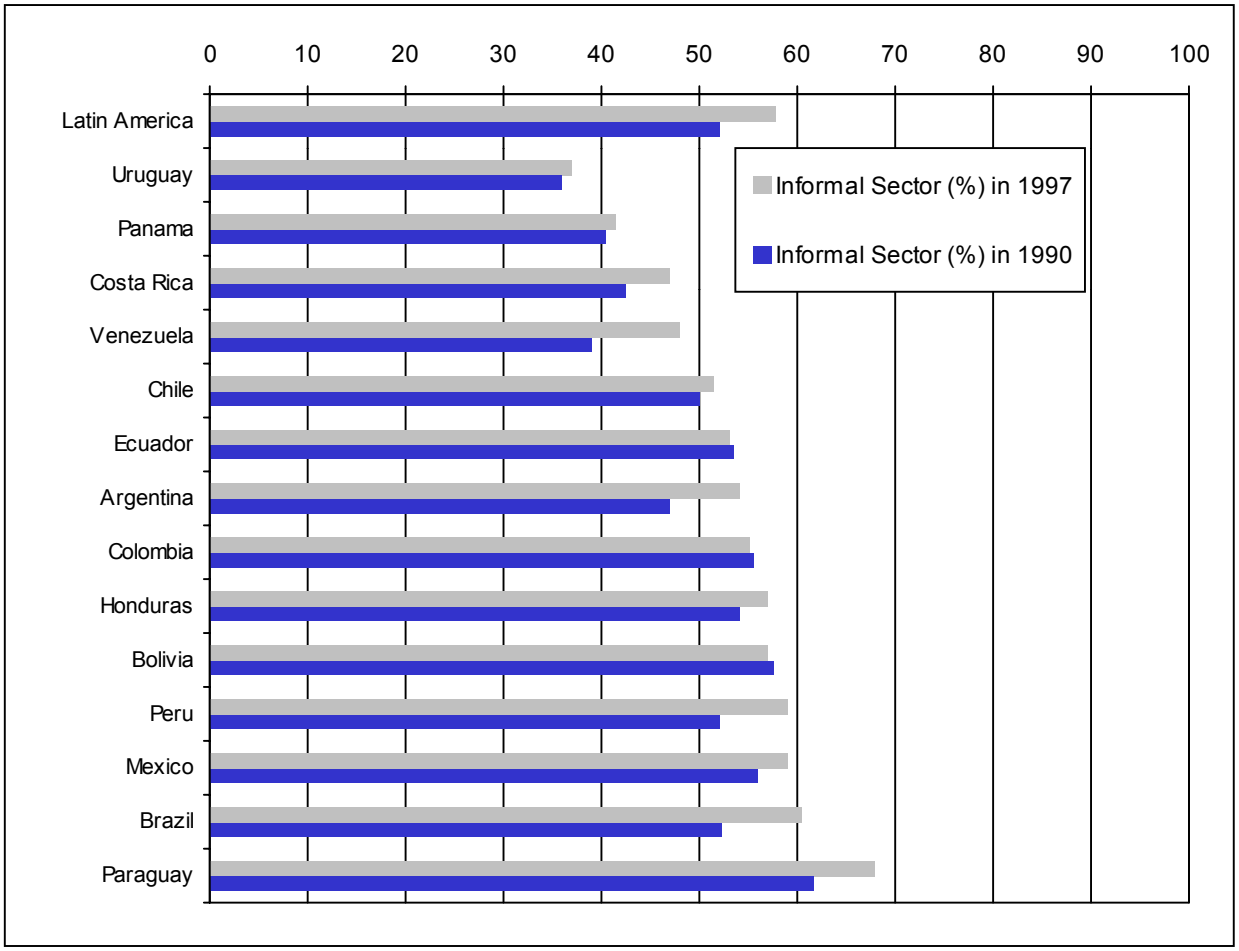
Graph V. Health expenditure among the poor (in US$) and percentage excluded



Graph VI: Percentage of population with geographical inaccessibility in Latin America and the Caribbean, 1990-1995



Graph VII: Growth of the informal sector in Latin America and the Caribbean, 1990-1997



Graph VIII: Percentage of births unattended by trained personnel in 1985 and 1996 in Latin America and the Caribbean

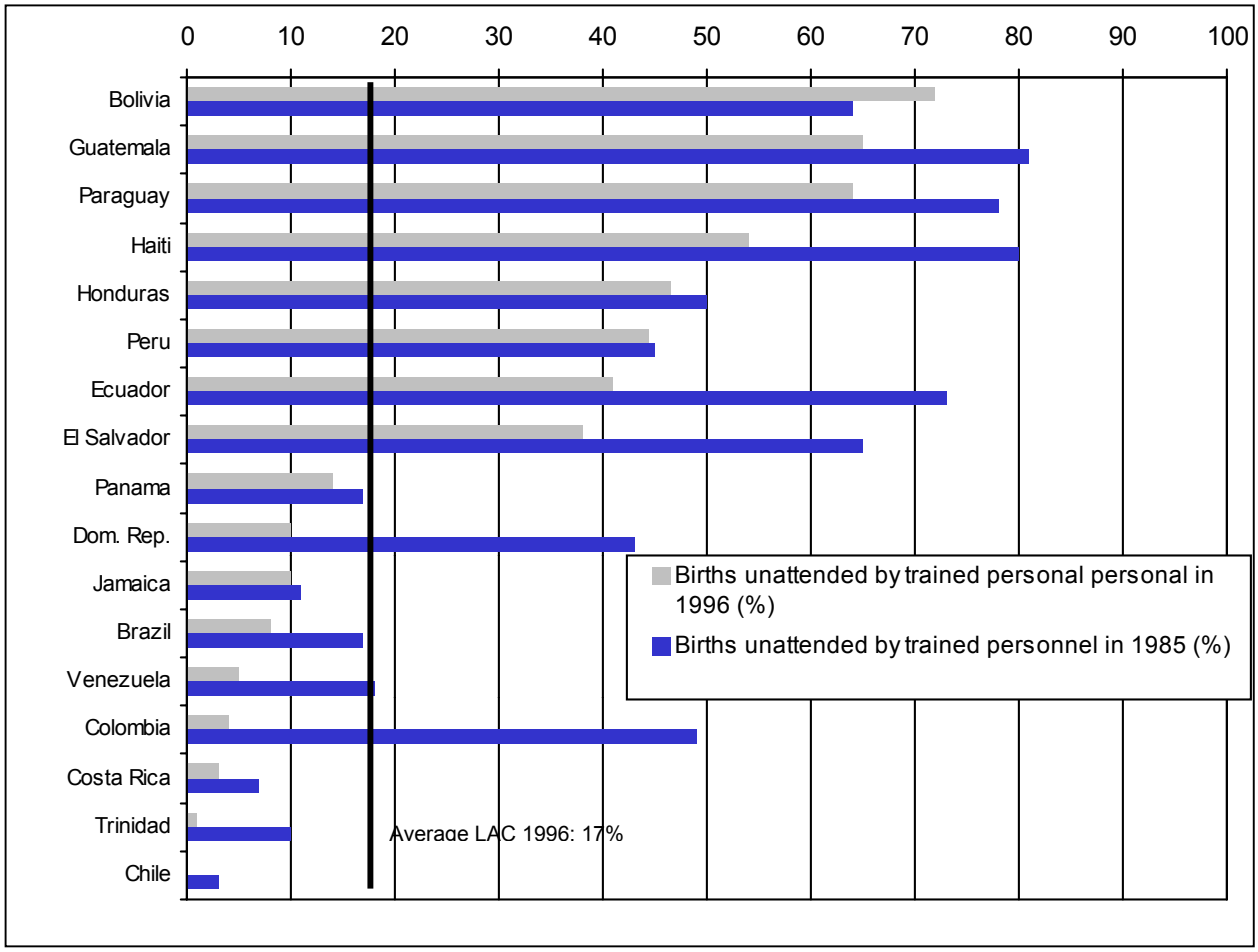


Table 1: Percentage of population with social security coverage in health. Latin America and the Caribbean, 1995

Subregion and country	Type of system	Social Security in Health As a %	Population without theoretical social security coverage In thousands
Andean Area			
Bolivia	Segmented	19	6005
Colombia	Segmented	11	34302
Ecuador	Segmented	19	9283
Peru	Segmented	30	16472
Venezuela	Segmented	36	13980
Southern Cone			
Argentina	Segmented	59	14255
Chile	Integrated	87	1847
Paraguay	Segmented	19	3911
Uruguay	Segmented	63	1191
Brazil	Integrated	80	31922
Central American Isthmus			
Belize	Segmented	n/d	0
Costa Rica	Integrated	85	533
El Salvador	Segmented	14	4875
Guatemala	Segmented	16	8380
Honduras	Segmented	14	4862
Nicaragua	Integrated	18	3629
Mexico	Segmented	49	46484
Panama	Integrated	61	1026
Latin Caribbean			
Cuba	Integrated	100	0
Haiti	Segmented	1	7546
Dominican Republic	Segmented	7	7275
Non-Latin Caribbean			
Antigua and Barbuda	Integrated	100	0
Bahamas	Integrated	100	0
Barbados	Integrated	100	0
Dominica	Integrated	100	0
Grenada	Integrated	100	0
Guyana	Integrated	100	0
Jamaica	Integrated	100	0
Saint Kitts and Nevis	Integrated	100	0
Saint Vincent and the Grenadines	Integrated	100	0
Saint Lucia	Integrated	100	0
Suriname	n/d	n/d	0
Trinidad and Tobago	Integrated	100	0
TOTAL			**217779**

Source: Health in the Americas. 1998 Edition
Maceira 1996
Note: n/d = no data

Table 2: Percentage of social security coverage, private insurance, and NGOs by country and subregion. Latin America and the Caribbean. 1996

Subregion and country	A - Social Security in Health 1995	B - Private Insurance	C - NGOs	Sum of A+B+C
	%	%	%	%
Andean Area				
Bolivia	19	< 5	5 to 10	34
Colombia	73 *	4	2 to 5	82
Ecuador	19	< 5	10 to 20	44
Peru	30	< 5	10 to 20	55
Venezuela	36	5 to 10	2 to 5	51
Southern Cone				
Argentina	59	15 to 25	< 1	85
Chile	87	15 to 25	< 1	113
Paraguay	19	< 5	5 to 10	34
Uruguay	63	> 25	< 1	89
Brazil	80	20	1 to 5	105
Central American Isthmus				
Belize	n/d	< 5	5 to 10	N/d
Costa Rica	85	< 5	2 to 5	95
El Salvador	14	< 5	5 to 10	29
Guatemala	16	< 5	10 to 20	41
Honduras	14	< 5	5 to 10	29
Nicaragua	18	< 5	5 to 10	33
Panama	49	< 5	2 to 5	59
Mexico	61	4	< 1	66
Latin Caribbean				
Cuba	100	n/d	n/d	100
Haiti	1	< 5	> 20	16
Dominican Republic	7	10 to 15	5 to 10	32
Non-Latin Caribbean				
Antigua and Barbuda	100	n/d	n/d	100
Bahamas	100	< 5	2 to 5	110
Barbados	100	< 5	< 1	106
Dominica	100	n/d	n/d	100
Grenada	100	n/d	n/d	100
Guyana	100	< 5	10 to 20	125
Jamaica	100	10 to 15	2 to 5	120
Saint Kitts and Nevis	100	n/d	n/d	100
Saint Vincent and the Grenadines	100	n/d	n/d	100
Saint Lucia	100	n/d	n/d	100
Suriname	n/d	5 to 10	5 to 10	100
Trinidad and Tobago	100	< 5	< 1	106

Source: Maceira 1996; Health in the Americas. 1998 Edition.

* 1998 data.

Table 3: Private health expenditure as a percentage of GDP and national health spending (NHE), and per capita private expenditure in dollars. Latin America and the Caribbean. 1995

Subregion and country	Private health expenditure 1995		
	% of GDP	% of NHE	per capita in dollars
Andean Area			
Bolivia	2.71	45	22
Colombia	5.14	70	98
Ecuador	3.45	68	48
Peru	2.7	49	62
Venezuela	4.76	63	144
Southern Cone			
Argentina	5.38	55	436
Chile	3.96	50	165
Paraguay	3.3	66	56
Uruguay	2.17	22	112
Brazil	5.01	66	186
Central American Isthmus			
Belize	2.15	54	58
Costa Rica	2.26	26	59
El Salvador	5	73	81
Guatemala	2.3	55	31
Honduras	3.75	51	22
Nicaragua	3.46	37	13
Panama	2.04	22	56
Mexico	2.55	53	85
Latin Caribbean			
Cuba	1.2	13	14
Haiti	2.22	63	6
Dominican Republic	3.27	62	48
Non-Latin Caribbean			
Antigua and Barbuda	2.41	39	195
Bahamas	1.81	42	216
Barbados	2.42	38	159
Dominica	2.63	40	79
Grenada	2.35	47	70
Guyana	2.33	31	14
Jamaica	2.57	51	39
Saint Kitts and Nevis	2.38	43	123
Saint Vincent and the Grenadines	1.96	36	45
Saint Lucia	2.6	48	80
Suriname	n/d	n/d	n/d
Trinidad and Tobago	2.56	55	97

Source: Health in the Americas. Volume 1. PAHO. 1998 Edition.

Table 4: Relative weight of private expenditure in the lowest and highest income quintiles. Latin America and the Caribbean

Subregion and country	Per capita private health expenditure Per capita income in Quintile 1 **	Per capita private health expenditure Per capita income in Quintile 5 ** (1980-1994)	Average per capita income in Quintile 5 / Average per capita income in Quintile 1
Andean Area			
Bolivia	3.1	0.4	9
Colombia	9.4	0.6	16
Ecuador	4	0.4	10
Peru	7.6	0.7	10
Venezuela	9.6	0.6	16
Southern Cone			
Argentina	53	3.4	16
Chile	10.6	0.6	17
Paraguay	n/d	n/d	n/d
Uruguay	n/d	n/d	n/d
Brazil	32.2	1	32
Central American Isthmus			
Belize	n/d	n/d	n/d
Costa Rica	5.2	0.4	13
El Salvador	n/d	n/d	n/d
Guatemala	8.7	0.3	30
Honduras	5.5	0.4	15
Nicaragua	2.7	0.2	13
Panama	9.5	0.3	30
Mexico	5.9	0.4	13
Latin Caribbean			
Cuba	n/d	n/d	n/d
Haiti	2	0.1	17
Dominican Republic	6.2	0.5	13
Caribbean	n/d	n/d	n/d
Antigua and Barbuda	n/d	n/d	n/d
Bahamas	n/d	n/d	n/d
Barbados	n/d	n/d	n/d
Dominica	n/d	n/d	n/d
Grenada	n/d	n/d	n/d
Guyana	n/d	n/d	n/d
Jamaica	4.2	0.5	8
Saint Kitts and Nevis	n/d	n/d	n/d
Saint Vincent and the Grenadines	n/d	n/d	n/d
Saint Lucia	n/d	n/d	n/d
Suriname	n/d	n/d	n/d
Trinidad and Tobago	n/d	n/d	n/d

Source: Figures developed on the basis of data from * Health in the Americas. 1998 Edition.
** Human Development Report 1999. UNDP. (1980–1994 refers to most recent year available).
n/d = In these countries, calculations could not be done because there was no information on average incomes broken down by quintile.
Note: Data from the same year were not available for the calculation. Thus, per capita private expenditure is from 1995 and average incomes by quintile are from the period 1980-1994.

Table 5: Per capita income, per capita national health expenditure (NHE) and population below the national poverty line. Latin America and the Caribbean

Countries and subregions	Per capita income in poorest 20% 1980-1994 *	NHE per capita dollars of 1995 **	Population below national poverty line (As a %) 1989-1994 *	Population below national poverty line (in thousands) 1989-1994
Andean Area				
Bolivia	703	48	57 ***	4104
Colombia	1042	140	19	6688
Ecuador	1188	71	35	3920
Peru	812	128	32	7392
Venezuela	1505	229	31	6634
Southern Cone				
Argentina	832	795	26	8918
Chile	1558	331	24 ***	3360
Paraguay	N/d	85	22	1034
Uruguay	N/d	516	6***	192
Brazil	578	280	17	26673
Central American Isthmus				
Belize	N/d	106	35	70
Costa Rica	1136	224	11	363
El Salvador	N/d	158	38	2090
Guatemala	357	56	58	5974
Honduras	399	44	53	2915
Nicaragua	479	35	50	2000
Panama	589	253	30 ***	780
Mexico	1437	160	34	30464
Latin Caribbean				
Cuba	N/d	106	n/d	n/d
Haiti	299	9	65 ***	4550
Dominican Republic	775	77	21	1617
Non-Latin Caribbean				
Antigua and Barbuda	..n/d	496	12	12
Bahamas	..n/d	518	n/d	n/d
Barbados	..n/d	421	n/d	n/d
Dominica	..n/d	198	33	33
Grenada	..n/d	150	20	20
Guyana	..n/d	44	43	344
Jamaica	922	76	32	768
Saint Kitts and Nevis	..n/d	289	15	15
Saint Vincent and the Grenadines	..n/d	125	17	17
Saint Lucia	..n/d	167	25	25
Suriname	..n/d	95	n/d ..	n/d
Trinidad and Tobago	..n/d	176	21	273
TOTAL				**121,245**

Source: Figures developed based on data

* Human Development Report 1999 (1989-1994 refers to most recent year available)

** Health in the Americas. WHO-PAHO 1998

*** Data for the year 1994, ECLAC, Social Panorama of Latin America 1998. Uruguay's figures represent urban population only.

Table 6: Population without geographical access by country in Latin America and the Caribbean. 1995

Countries	Population without geographical access to health services (1) 1990-1995 %	Population without geographical access to health services (2) 1995 in thousands
Andean Area		
Bolivia	33	2446.62
Colombia	19	7322.98
Ecuador	12	1375.2
Peru	56	13177.92
Venezuela	17	3872
Southern Cone		
Argentina	29	10082.72
Chile	3	426.3
Paraguay	37	1786.36
Uruguay	0	0
Brazil	26	43432
Central American Isthmus		
Belize	n/d	n/d
Costa Rica	20	710.8
El Salvador	60	3401.4
Guatemala	43	4289.68
Honduras	31	1752.74
Nicaragua	17	752.42
Panama	30	789.3
Mexico	7	6380.15
Latin Caribbean		
Cuba	0	0
Haiti	40	3048.8
Dominican Republic	22	1721.06
Non-Latin Caribbean		
Antigua and Barbuda	n/d	n/d
Bahamas	n/d	n/d
Barbados	n/d	n/d
Dominica	n/d	n/d
Grenada	n/d	n/d
Guyana	n/d	n/d
Jamaica	10	244.7
Saint Kitts and Nevis	n/d	n/d
Saint Vincent and the Grenadines	n/d	n/d
Saint Lucia	n/d	n/d
Suriname	n/d	n/d
Trinidad and Tobago	0	0
Total		**107013.15**

Source: (1) Human Development Report. UNDP 1998.

(2) Calculations were carried out using population data for the various countries appearing in CELADE 1995.

Table 7: Number of inhabitants per physician and ratio between public and private expenditure. Latin America and the Caribbean. 1997

	Country	Number of inhabitants per physician1997	Ratio between composition (%) of public and private expenditure
Surplus	Cuba	231	6.69
	Uruguay	271	3.55
	Argentina	373	0.82
	Panama	609	3.55
	Mexico	617	0.89
	Venezuela	619	0.59
	Dominican Republic	671	0.61
	Ecuador	702	0.47
	Bahamas	708	1.38
	Brazil	747	0.52
	Costa Rica	792	2.85
	Barbados	881	1.63
	Chile	906	1
	Colombia	914	0.43
	Peru	944	1.04
Shortage	Saint Kitts and Nevis	1129	1.78
	El Salvador	1192	0.37
	Guatemala	1282	0.82
	Antigua and Barbuda	1305	1.56
	Suriname	1332	3
	Trinidad and Tobago	1389	0.82
	Honduras	1437	0.96
	Paraguay	1546	0.52
	Belize	1603	0.85
	Jamaica	1754	0.96
	Grenada	2000	1.13
	Dominica	2183	1.5
	Saint Vincent and the Grenadines	2183	1.78
	Bolivia	2217	1.22
	Nicaragua	2294	1.7
	Saint Lucia	2874	1.08
	Guyana	5848	2.23
	Haiti	12048	0.59

Source: Figures developed on the basis of data from Health in the Americas. 1998 Edition.

Table 8: Percentage of population without access to medical services due to lack of supply, classified according to public/private expenditure ratio in health, 1997

	Public/ private expenditure ratio	No. of physicians	Estimated demand based on population	Affected population (in thousands) 1997
Quadrant I				
El Salvador	0.,37	4956	5908	952
Guatemala	0.82	8205	10519	2314
Trinidad and Tobago	0.82	961	1335	374
Honduras	0.96	4162	5981	1819
Paraguay	0.52	3292	5089	1797
Belize	0.85	142	227	85
Jamaica	0.96	1416	2483	1067
Haiti	0.59	656	7909	7253
Subtotal I				**15661**
Quadrant II				
Saint Kitts and Nevis	1.78	36	41	5
Antigua and Barbuda	1.56	51	66	15
Suriname	3	325	433	108
Grenada	1.13	47	93	47
Dominica	1.5	33	71	38
Saint Vincent and the Grenadines	1.78	51	111	60
Bolivia	1.22	3506	7773	4267
Nicaragua	1.7	2039	4678	2639
Saint Lucia	1.08	51	146	95
Guyana	2.23	146	854	708
Subtotal II				**7982**
Total				**23643**

Table 9: Number of beds per 1000 inhabitants distributed by country and sector. Latin America and the Caribbean, 1996

	Subregion and country	Hospital beds per 1000 inhab. (1996) (3)	Percentage of hospital beds by sector				
			Public		Private	Philanthropic	Military
			Not Soc. Sec.	Social Sec.			
Shortage	Haiti	0.7	59	0.9	23.6	16.5	,,,,,,,,,
	Guatemala	1	64.7	12.9	15.3	6.4	0.7
	Honduras	1.1	72	6	21.5	,,,,,,,,,	0.5
	Mexico	1.2	32.5	34.5	30.4	0.5	2.2
	Paraguay	1.3	58.8	14	26.6	,,,,,	0.6
	Colombia	1.5	53.4	8.5	35.4	0.9	1.9
	Peru	1.5	51.7	20	19.4	0.4	8.4
	Venezuela	1.5	72.6	18	8.3	0.7	0.4
	Dominican Republic	1.5	61.1	9.8	29	,,,,,,,	,,,,,,,,
	Ecuador	1.6	60.1	9.6	18.5	7.4	4.4
	Nicaragua	1.6	93	,,,,,,,	3	,,,,,,	4.1
	Bolivia	1.7	52.5	26.8	19	,,,,,,,,	1.7
	El Salvador	1.7	69.6	20.3	9.5	0.6	,,,,,,,,
	Saint Vincent and the Grenadines	1.8	100	,,,,,,,	,,,,	,,,,,,,,,	,,,,,,,,
	Costa Rica	1.9	,,,,,,,	96.5	3.5	,,,,,,,,,	,,,,,,,,,
	Belize	2.1	96.8	,,,,,,,	3.2	,,,,,,,	,,,,,,,
	Panama	2.2	70.6	17.7	11.6	,,,,,	,,,,,,
	Jamaica	2.2	94.4	,,,,,,	5.6	,,,,,,,,,	,,,,,,,,,,
	Chile	2.7	71	0,1	20.5	8.4	,,,,,,
	Dominica	2.7	100	,,,,,	,,,,,	,,,,,,,,	,,,,,,,,,
	Brazil	3.1	27.1	1.1	48	23.3	
	Argentina	3.3	57.2	3.6	37.7	0.5	1
	Guyana	3.8	86.1	,,,,,,,	13.1	0.8	,,,,,,,,
	Saint Lucia	3.8	100	,,,,	,,,,	,,,,,,	,,,,,,
	Suriname	3.8	55.9	,,,,,,,	40.4	3.7	,,,,,,,,
	Antigua and Barbuda	3.9	94.1	,,,,,,	5.9	.....	,,,,,,,,
	Bahamas	4	92.3	,,,,,,,	7.7	,,,,,	,,,,,
	Uruguay	4.4	68.3	0.7	31	,,,,,,	,,,,,,,
Adequate supply	Trinidad and Tobago	5	89.3	,,,,,,,	10.7	,,,,,,	,,,,,
	Cuba	5.1	100	,,,,,,	,,,,,,	,,,,,,,	,,,,,,,,
Surplus	Grenada	5.7	100	,,,,,	,,,,,,,	,,,,,,,,	,,,,,,,,
	Saint Kitts and Nevis	6.3	100	,,,,	,,,,,	,,,,,,,	,,,,,,,
	Barbados	7.6	98.8	,,,,,	1.2	,,,,,,,	,,,,,,,

Source: Health in the Americas: 1998 Edition

Table 10: Estimated population without access due to shortage of beds. Latin America and the Caribbean, 1996

Countries	Supply of beds *1996	Demand for beds according to standard 1996	Estimated population without access to services due to lack of supply (in thousands) 1996
Andean Area	**153721**	**524165**	
Bolivia	12650	37960	5062
Colombia	54502	196425	28385
Ecuador	18141	58490	8070
Peru	35690	119735	16809
Venezuela	32738	111555	15763
Southern Cone	**676847**	**1098495**	
Argentina	115803	176100	12059
Chile	38446	72095	6730
Paraguay	6658	24790	3626
Uruguay	14064	16210	429
Brazil	501876	809300	61485
Central American Isthmus	**153744**	**628285**	
Belize	473	1095	124
Costa Rica	6645	18255	2322
El Salvador	9571	28935	3873
Guatemala	10703	51220	8103
Honduras	6497	29080	4517
Nicaragua	6666	22755	3218
Panama	5901	13385	1497
Mexico	107288	463560	71254
Latin Caribbean	**73667**	**133720**	
Cuba	56505	55095	0
Haiti	5241	38820	6716
Dominican Republic	11921	39805	5577
Non-Latin Caribbean	21974	30500	0
Antigua and Barbuda	257	330	15
Bahamas	1119	1470	70
Barbados	1998	1325	0
Dominica	195	355	32
Grenada	522	460	0
Guyana	3242	4190	190
Jamaica	5400	12475	1415
Saint Kitts and Nevis	260	205	0
Saint Vincent and the Grenadines	207	565	72
Saint Lucia	534	720	37
Suriname	1618	2055	87
Trinidad and Tobago	6622	6350	0
Total	**1079953**	**2415165**	**267537**

Source: Figures developed on the basis of population data from the Anuario Estadistico de America Latina y el Caribe. CEPAL. 1998 Edition.
*Health in the Americas. PAHO/WHO,1998 Edition.

Table 11: Percentage of births unattended by trained staff and estimated population excluded based on these births. Latin America and the Caribbean. 1996

Subregion and country	Births not attended by trained staff (1) %	Estimated population excluded based on births unattended by trained staff (2) In thousands
Andean Area		
Bolivia	72	5466.24
Colombia	4	1571.4
Ecuador	41	4796.18
Peru	44	10536.68
Venezuela	5	1115.55
Southern Cone		
Argentina	5	1761
Chile	0	0
Paraguay	64	3173.12
Uruguay	1	32.42
Brazil	8	12948.8
Central American Isthmus		
Belize	21	46.41
Costa Rica	3	109.53
El Salvador	38	2199.06
Guatemala	65	6658.6
Honduras	46	2675.36
Nicaragua	13	591.63
Panama	14	374.78
Mexico	26	24105.12
Latin Caribbean		
Cuba	0	0
Haiti	54	4192.56
Dominican Republic	10	796.1
Non-Latin Caribbean		
Antigua and Barbuda	0	0
Bahamas	1	2.8
Barbados	0	0
Dominica	0	0
Grenada	0	0
Guyana	7	59.08
Jamaica	10	246.5
Saint Kitts and Nevis	0	0
Saint Vincent and the Grenadines	0	0
Saint Lucia	0	0
Suriname *	20	85.6
Trinidad and Tobago **	1	13.2
Total	**17**	**83557.72**

Source: Health in the Americas. PAHO/WHO, 1998 Edition.

Table 12: Percentage of immunization coverage for children under 1 year in Latin America and the Caribbean. 1997

Subregion and country	Immunization coverage in children under 1 year (%)			
	DPT3	OPV 3	BCG	Measles
Andean Area				
Bolivia	82	82	98	98
Colombia	81	82	96	89
Ecuador	76	77	99	75
Peru	98	97	98	95
Venezuela	60	76	98	68
Southern Cone				
Argentina	85	92	100	98
Chile	91	91	98	92
Paraguay	82	82	87	61
Uruguay	88	88	99	80
Brazil	79	89	99	99
Central American Isthmus				
Belize	85	85	90	80
Costa Rica	84	84	91	86
El Salvador	98	96	100	96
Guatemala	78	78	94	74
Honduras	94	93	99	89
Nicaragua	94	99	99	94
Panama	95	99	99	92
Mexico	93	94	99	84
Latin Caribbean				
Cuba	99	97	99	99
Haiti	35	32	40	30
Dominican Republic	80	81	88	80
Non-Latin Caribbean				
Antigua and Barbuda	99	99	n/d	93
Bahamas	86	86	n/d	93
Barbados	96	96	n/d	92
Dominica	99	99	99	99
Grenada	95	95	n/d	92
Guyana	88	89	94	82
Jamaica	90	90	97	89
Saint Kitts and Nevis	99	99	99	97
Saint Vincent and the Grenadines	99	99	99	99
Saint Lucia	98	98	99	95
Suriname	90	91	n/d	78
Trinidad and Tobago	85	81	n/d	88

(2) World Health Report 1999.
(1) Health in the Americas, 1998 Edition, Vaccines.
Chile, the Dominican Republic, Guyana, Jamaica, Saint Kitts and Nevis and Saint Lucia Information: from UNICEF. Grouped Surveys of Multiple Indicators (GSMI).
WHO and UNICEF Demographic and Health Surveys. Population with complete immunization 1995-1997%, in children under 1 year. In Argentina the 1996 value for BCG was used because 1997 data was not available.

Table 13: Percentage of dropout between vaccination against TB and Measles and between TB and the vaccine with the lowest percentage coverage, and extrapolation to the total population in Latin America and the Caribbean. 1998

Subregion and country	Gap between BCG and Measles	Population represented by live births1998 gap	Gap between BCG and vaccine with lowest % coverage	Population represented by live births 1998 gap
Andean Area				
Bolivia	0	0	16	1244
Colombia	7	2920	15	6257
Ecuador	24	2894	32	3858
Peru	3	746	3	746
Venezuela	30	6748	38	8548
Southern Cone				
Argentina	2	713	15	5348
Chile	6	895	7	1044
Paraguay	26	1319	26	1319
Uruguay	19	627	19	627
Brazil	0	0	20	32817
Central American Isthmus				
Belize	10	23	10	23
Costa Rica	5	206	7	288
El Salvador	4	477	4	477
Guatemala	20	2131	20	2131
Honduras	10	604	10	604
Nicaragua	5	236	5	236
Panama	7	192	7	192
Mexico	15	14284	15	14284
Latin Caribbean				
Cuba	0	0	2	221
Haiti	10	791	10	791
Dominican Republic	8	654	8	654
Non-Latin Caribbean				
Antigua and Barbuda	n/d	0	n/d	0
Bahamas	n/d	0	n/d	0
Barbados	n/d	n/d	n/d	0
Dominica	0	0	0	0
Grenada	n/d	0	n/d	0
Guyana	12	102	12	102
Jamaica	8	205	8	205
Saint Kitts and Nevis	2	1	2	1
Saint Vincent and the Grenadines	0	0	n/d	0
Saint Lucia	4	6	4	6
Suriname	n/d	0	n/d	n/d
Trinidad and Tobago	n/d	0	n/d	n/d
Total			**16.5**	**82023**

Source: (a) 1998 Basic Indicators. WHO/PAHO.
(b) UNICEF indicators.
1997 data on live births and population were used in the calculation.

Table 14: Population without access to drinking water and sewerage services in Latin America and the Caribbean. 1995.

Countries	Population without access to drinking water services 1995 In thousands	As a %	Population without access to sewerage services 1995 In thousands	As a %	Population selected based on highest percentage without access to one of the two services. In thousands
Andean Area					
Bolivia	2891	39	4004	54	4004
Colombia	7708	20	13104	34	13104
Ecuador	3438	30	4928	43	4928
Peru	7060	30	6118	26	7060
Venezuela	4587	21	6116	28	6116
Southern Cone					
Argentina	12169	35	8692	25	12169
Chile	2132	15	284	2	2132
Paraguay	2945	61	3283	68	3283
Uruguay	354	11	1577	49	1577
Brazil	49478	31	52671	33	52670
Central American Isthmus					
Belize	34	16	131	61	131
Costa Rica	0	0	0	0	
El Salvador	2891	51	2324	41	2891
Guatemala	3292	33	3292	33	3292
Honduras	1300	23	1018	18	1300
Nicaragua	2788	63	2567	58	2788
Panama	316	12	237	9	316
Mexico	13672	15	24609	27	24609
Latin Caribbean					
Cuba	877	8	1096	10	1096
Haiti	4345	57	5564	73	5564
Dominican Republic	2738	35	1330	17	2738
Non-Latin Caribbean					
Antigua and Barbuda	3	-	0	-	3
Bahamas	17	6	0	0	17
Barbados	0	0	0	0	N/d
Dominica	4	6	11	15	11
Grenada	18	20	0	0	18
Guyana	292	35	84	10	292
Jamaica	392	16	98	4	392
Saint Kitts and Nevis	0	0	4	-	4
Saint Vincent and the Grenadines	8	-	0	0	8
Saint Lucia	0	0	0	0	0
Suriname	47	11	110	26	110
Trinidad and Tobago	52	4	52	4	52
Total	**125849**	**27**	**143304**	**30**	**152675**

Source: 1998 Basic Indicators. Health Status in the Americas. Health Situation Analysis Program, Division of Health and Human Development. PAHO/WHO.

Table 15: Profile of groups excluded from social protection in health. Latin America and the Caribbean. 1992-1998

Countries	Poor	Elderly	Women and Children	Ethnic Groups	Informal Workforce	Unemployed, under-Employed	Rural Pop.
Andean Area							
Bolivia	X			X	X		X
Colombia	X	X	X	X		X	
Ecuador	X	X	X	X	X	X	
Peru	X		X	X	X		
Venezuela	X	X		X	X	X	X
Southern Cone							
Argentina	X	X		X	X	X	X
Chile	X	X				X	X
Paraguay	X		X	X			X
Uruguay	X	X	X		X	X	X
Brazil	X	X	X	X		X	
Central American Isthmus							
Belize	X		X	X		X	X
Costa Rica	X			X	X		X
El Salvador	X	X	X			X	X
Guatemala	X		X	X	X	X	
Honduras	X	X		X		X	
Nicaragua	X	X		X		X	X
Panama	X	X			X	X	X
Mexico	X	X	X	X	X		X
Latin Caribbean							
Cuba	--	--	--	--	--	--	--
Haiti	X	X	X			X	X
Dominican Republic	X	X			X	X	X
Non-Latin Caribbean							
Antigua and Barbuda	--	--	--	--	--	--	--
Bahamas	--	--	--	--	--	--	--
Barbados	--	--	--	--	--	--	--
Dominica	--	--	--	--	--	--	--
Grenada	--	--	--	--	--	--	--
Guyana	X		X			X	X
Jamaica	X					X	X
Saint Kitts and Nevis	--	--	--	--	--	--	--
Saint Vincent and the Grenadines	--	--	--	--	--	--	--
Saint Lucia	--	--	--	--	--	--	--
Suriname		X	X	X		X	
Trinidad and Tobago	X					X	X

Source: Comparative Analysis of Policies to Extend Social Protection in Health to Excluded Groups in Latin America and the Caribbean. ISALUD 1999.

Table 16: Population without social security coverage in health in countries of Latin America and the Caribbean. 1995

	Coverage		Access				Structure		Process		
Subregion and country	Classification according to social security coverage in health and level of integration in delivery of services	Population without theoretical soc. sec. coverage	Population below poverty line	Population without geographical access to health services	Rural population	Indigenous population	Population affected due to lack of supply of medical services	Population affected due to lack of supply of hospital beds	Estimated population excluded based on births not attended by trained staff	Estimated population excluded based on gap between BCG and measles coverage	Estimated population excluded based on gap between BCG vaccine and vaccine with lowest coverage
			1989-1994	**1995**	**1998**	**1992**	**1997**	**1996**	**1996**	**1998**	**1998**
Andean Area											
Bolivia	4	6005	4104	2447	2936	4900	4267	5062	5466	0	1244
Colombia	3	34302	6688	7323	9798	600		28385	1571	2920	6257
Ecuador	4	9283	3920	1375	4748	4100		8070	4796	2894	3858
Peru	4	16472	7392	13178	6944	9300		16809	10537	746	746
Venezuela		13980	6634	3872	3068	400		15763	1116	6748	8548
Southern Cone											
Argentina	3	14255	8918	10083	4010	350		12059	1761	713	5348
Chile		1847	3360	426	2327	1000		6730	0	895	1044
Paraguay	4	3911	1034	1786	2374	100	1997	3626	3173	1319	1319
Uruguay	3	1191	192	0	295			429	32	627	627
Brazil	1	31922	26673	43432	32929	300		61485	12949	0	32817
Central American Isthmus											
Belize	1	0	70	n/d	123	29	85	124	46	23	23
Costa Rica	1	533	363	711	1792	30		2322	110	206	288
El Salvador	4	4875	2090	3401	3271	400	952	3873	2199	477	477
Guatemala	4	8380	5974	4290	6503	5300	2314	8103	6659	2131	2131
Honduras	4	4862	2915	1753	3338	700	1819	4517	2675	604	598
Nicaragua	2	3629	2000	752	1620	160	2339	3218	592	236	234
Panama		1026	780	789	1193	140		1497	375	192	191
Mexico	3	46484	30464	6380	24916	12000		71254	24105	14284	14141
Latin Caribbean											
Cuba	1	0	n/d	0	2545			0	0	0	221
Haiti	4	7622	4550	3049	5063		7253	6716	4193	791	791
Dominican Republic	4	7275	1617	1721	2972			5577	796	654	654
Non-Latin Caribbean								0			
Antigua and Barbuda	1	0	12	n/d	43		15	15	0	0	0
Bahamas	1	0	n/d	n/d	36			70	3	0	0
Barbados	1	0	n/d	n/d	134			0	0	n/d	0
Dominica	1	0	33	n/d	21		38	32	0	0	0

	Coverage		Access				Structure		Process		
Subregion and country	Classification according to social security coverage in health and level of integration in delivery of services	Population without theoretical soc. sec. coverage	Population below poverty line	Population without geographical access to health services	Rural population	Indigenous population	Population affected due to lack of supply of medical services	Population affected due to lack of supply of hospital beds	Estimated population excluded based on births not attended by trained staff	Estimated population excluded based on gap between BCG and measles coverage	Estimated population excluded based on gap between BCG vaccine and vaccine with lowest coverage
			1989-1994	**1995**	**1998**	**1992**	**1997**	**1996**	**1996**	**1998**	**1998**
Grenada	1	0	20	n/d	58		47	0	0	0	0
Guyana	1	0	344	n/d	538	45	708	190	59	102	102
Jamaica	1	0	768	245	1140		1067	1415	247	205	199
Saint Kitts and Nevis	1	0	15	n/d	27		5	0	0	1	1
Saint Vincent and the Grenadines	1	0	17	n/d	55		60	72	0	0	0
Saint Lucia	1	0	25	n/d	92		95	37	0	6	6
Suriname	1	0	n/d	n/d	217	30	108	87	86	0	n/d
Trinidad and Tobago	1	0	273	0	355		374	0	13	0	n/d
Total		**217855**		**107013**	**125480**	**39932**	**23643**	**267537**	**83558**	**36881**	**82023**

Table 17: Structure of non-farm employment, 1990-1997

Countries /Years	Informal sector					Formal sector	
	Total	**Independent Worker a/**	**Domestic service**	**Small businesses b/**	**Total**	**Public Sector**	**Large private enterprises**
Latin America							
1990	51.8	24.7	7.0	20.1	48.2	15.5	32.7
1991	52.5	25.1	6.9	20.6	47.5	15.2	32.3
1992	53.2	25.6	6.9	20.7	46.8	14.8	32.0
1993	54.1	25.4	7.3	21.4	45.9	13.9	32.0
1994	55.1	25.9	7.3	21.8	44.9	13.5	31.4
1995	56.2	26.7	7.4	22.2	43.8	13.4	30.4
1996	57.4	27.3	7.4	22.7	42.6	13.2	29.4
1997	57.7	27.1	7.6	23.0	42.3	13.0	29.3

Source: ILO.