# Exclusion in Health

## in Latin America and the Caribbean



**Series No. 1**
**Extension of Social Protection in Health**

**Pan American Health Organization**
*Pan American Sanitary Bureau, Regional Office of the*
**World Health Organization**

**Sida**

**Swedish International Development Cooperation Agency**

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*Pan American Sanitary Bureau, Regional Office of the*
**WORLD HEALTH ORGANIZATION**

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**2004**

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# FOREWORD

Nowadays, when the impetus of health sector reformsbased on the concepts and proposals of "Investing in health" (in reference to the influential and polemic World Bank report from 1993) seems to have decreased due in a great extent to the evidence of increased inequity and loss of social protection brought along by those precepts, a wave of intense criticism in many LAC countries conveys the claim for higher degrees of equity, efficiency and sustainability of health systems. This situation represents an opportunity to advance toward the objective of achieving universal and equal access to health care for all people. This requires the establishment of political agreements, solid proposals and mechanisms aimed explicitly at ensuring effective coverage for those who currently do not enjoy these services and are excluded from the benefits of health protection systems.

Exclusion in health is a subject of growing importance in the public policy arena, not only as a problem that should be confronted and resolved, but also as an analytical tool to evaluate interventions designed to improve people's health status and the performance of the health systems.

Despite the importance of exclusion in health as a social phenomenon and public policy problem, it is not currently on the list of priority issues for the socio-political agenda of countries in the Region, and sectoral reforms of the last decade have touched on this issue in only an indirect and fragmented manner.

One factor that hinders the adequate confrontation of exclusion in health in the Region's countries is that its magnitude, causal factors and affected populations are not accurately known at the present time. It is also unclear which strategies and interventions have proven to be more efficient, equitable, and sustainable in combating this exclusion. This is primarily due to two reasons: the multi-causal nature of exclusion in health, which makes its measurement complex and to a scarcity of methodological instruments for characterizing and measuring the problem.

Thus, it is necessary to generate conceptual/analytical frameworks and methodologies/tools to analyze the subject in-depth and with accuracy. Specifically, instruments are required that make it possible to analyze exclusion in health as an important determinant of the state of health of a country, region, province, or state; to identify the political, social, economic, demographic, ethnic, gender

and age characteristics that are associated with social exclusion in health; to distinguish its causative versus structural factors; and to identify which interventions, strategies or policies are most effective in reducing it. By detecting these factors will make possible to identify the most adequate paths to expand social protection in health under different conditions and to contribute to a better decision-making in this area.

The Strategic Health Development Area at the Pan American Health Organization (PAHO/ WHO) has assumed the extension of social protection in health as a technical cooperation priority. Given this commitment, it has decided to research further into understanding this phenomenon, recognizing its complexity and its multidimensional nature. The study whose results are presented in this book is part of a joint initiative between PAHO/WHO and the Swedish Agency for International Development SIDA, which we thank once more for its support in the development of this line of work.

This study is the first in a series that we hope to carry out in the coming years with the purpose of obtaining a clear panorama of the exclusion in health situation in the Region and of advancing toward the identification of the most adequate strategies to combat it and to strengthen policies and strategies for the Extension of Social Protection in Health.

We are certain that the results of this work will help to strengthen the efforts in the expansion of the protection and guarantee of citizens rights in the countries of the Americas and will be useful for the Public Health Community (academics, decision-makers, managers and leaders in society) as it aims to achieve the objective of health for all under conditions of equity, dignity, and respect for the special cultural characteristics of the various peoples of our Region.

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# COLABORATORS

This book is a product of a join initiative between the Pan American Health Organization PAHO/WHO and the Swedish International Development Cooperation Agency - SIDA, formulated and agreed by Daniel Lopez-Acuña from PAHO/WHO and Anders Norstrom from SIDA in the year 2000, and implemented until the year 2002 by the Health Systems and Services Development Division and since the year 2003 by the Area of Strategic Health Development - SHD of PAHO/WHO in Washington D.C.

A multidisciplinary team led by Hernán Rosenberg, of PAHO-Washington, and also formed by Bernt Andersson of SIDA during his tenure in PAHO/WHO - Washington, D.C., and by Cecilia Acuña, PAHO/WHO consultant, prepared the methodological research guide and conducted the research in the first four countries.

Cecilia Acuña and Eduardo Levcovitz from the Health Policies Systems Unit, SHD of PAHO/WHO - Washington, D.C., led the team that conducted the study in Honduras and Peru.

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Each local team also had the support of the PAHO/WHO Representative Offices and of diverse professionals from governmental institutions in the respective countries.

The econometric analysis of the exclusion variables, as well as the preparation of the composite index for four countries, was carried out by Miguel Madueño under the supervision of Margarita Petrera, from the PAHO/WHO Representative Office in Peru.

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*The authors.*

*"The aim of society and of solidarity is
that everyone shall have access to resources
so that they will be able to realize the essential
undertakings of human life, the great life projects"*

*Olof Palme*

# INTRODUCTION

The study whose results are presented below is part of the activities proposed in the work plan of the "Extension of Social Protection in Health" (ESPH) project and responds to a strategy developed jointly by the Swedish Agency for International Development (SIDA) and PAHO/WHO in the year 2000 in order to address the problem of exclusion in health in Latin American and Caribbean countries, through the expansion of social protection in health. The strategy consists of three phases:

- Phase 1: Learn about the current state of social protection in health and of its counterpart, social exclusion in health, in the countries of the Region.
- Phase 2: Develop an Action Plan to reduce exclusion and expand social protection in health, through the organization of social dialogue activities.
- Phase 3: Implement the interventions defined in the Action Plan.

This strategy began in 2001 with a pilot project designed to develop and validate methodological instruments that make it possible to characterize and measure exclusion in health in the countries of the Region. The product of this project was a Methodological Guide for the characterization of exclusion in health, which was validated through its application in four countries: Ecuador, Guatemala, Paraguay, and the Dominican Republic.

During 2002, the characterization of exclusion in health began in two additional countries, Honduras and Peru, and in the Federal District of Mexico.

The study conducted in each country has three components:

1. Analysis and measurement of exclusion in health, identifying its principal causes as well as who is excluded and where they are located.
2. Analysis of the structure of the existing health protection systems.
3. Analysis of the strategies implemented to improve people's living conditions and an evaluation of their impact on the exclusion in health situation, identifying the principal factors that affect their results.

This book deals with the first component, the analysis and measurement of exclusion in health.

# EXECUTIVE SUMMARY

This publication presents the results of studies conducted between 2001 and 2003 in six countries of the Region, with the objective of characterizing and measuring exclusion in health. The countries where the study was conducted are Ecuador, Guatemala, Honduras, Peru, Paraguay, and the Dominican Republic.

For the purposes of this work, exclusion in health was defined as the lack of access of certain groups or people to various goods, services and opportunities that improve or preserve health status and that other individuals and groups in the society enjoy. From this definition, it follows that this is a phenomenon that transcends the health sector.

In accordance with this definition, the following premises were taken as a starting point:

a) Exclusion in health is an entity that is distinguishable and possible to characterize.

b) It is possible to identify indicators to measure exclusion in health.

c) Exclusion in health can be utilized as a measure of the success or failure of policies designed to improve health status.

d) Health protection systems are not neutral concerning exclusion in health but, on the contrary, can determine various degrees of exclusion within the architecture of a system.

With the objective of attempting to overcome the difficulties of characterizing exclusion in health, a methodological guide with both qualitative and quantitative data collection techniques was prepared. Methodologically, the quantitative technique utilized consists of independently identifying the excluded population in each one of the analytical dimensions and for each one of the causes of exclusion. A limitation of this technique is that it does not consider interactions among the causes of exclusion or differences in the degree of exclusion within a country's population. With the goal of correcting this limitation, the study in each country was complemented by an econometric analysis based on the calculation of a continuous indicator of exclusion according to the family of measures proposed by Foster, Greer, and Thorbecke (FGT).

The study results show that the most important exclusion factors in health differ for each country.

In the case of Peru, external factors to the health system contribute more to explaining this phenomenon than those linked to the health system itself (internal dimension). It is important to note that entry barriers explain 54% of the exclusion risk in this country, while variables associated with problems in health provision account for 46% of this risk.

In Ecuador, factors linked to the supply of health services, or the internal dimension of exclusion, contribute more to explaining this phenomenon (59%) than those linked to entry barriers (41%).

In Paraguay, as in Peru, factors linked to the external dimension of exclusion (entry barriers) contribute more to explaining this phenomenon than those linked to the internal dimension, although with differences in the composition of the relevant variables.

In the case of Honduras, factors linked to the internal dimension of exclusion (the structure and supply of services) contribute more to explaining this phenomenon than those linked to factors external to the health system. While the former factors explain 55% of the exclusion risk in this country, the variables associated with external factors account for 45% of this risk.

The study shows that exclusion in health appears to be strongly linked to poverty; marginality; racial discrimination and others forms of social exclusion, as well as to cultural patterns including language; informal structures in employment, underemployment, and unemployment; geographical isolation, especially linked to rurality; lack of basic services such as electricity, drinkable water, and basic sanitation; and a low level of education or information on the part of service users.

However, there are dimensions of exclusion in health that appear to depend on variables more related to the health sector itself, such as the service delivery model; the deficit of adequate infrastructure to respond to the demand for health; and the assignment of resources within the delivery network.

In addition, lack of health insurance emerges as an important barrier in access to health care, closely related to the labor situation in the cases of Paraguay, Peru and Honduras.

The result of the econometric study reveals two fundamental aspects of the exclusion conditions of the population classified as excluded in health:

- In the first place, that the excluded population faces multiple sources of exclusion in all of the countries studied.
- Secondly, that their degree of exclusion is almost of total exclusion.

In terms of policy actions, these results suggest that the policies aimed at mitigating this situation should not concentrate on a single dimension or factor of exclusion, but should be multi-sectoral and inter-sectoral.

Given the dynamic characteristics of the exclusion in health phenomenon, it is necessary to generate the conditions necessary for its measurement, which is to be assumed by national teams as a periodic task.

The group of methodologies utilized for the measurement of exclusion in health in this study proved to be highly explanatory of the different dimensions of the exclusion in health phenomenon in an integrated manner.

The measurement of exclusion carried out in this way may constitute an important instrument for the definition of countries' social policies.

# CONCEPTUAL FRAMEWORK

## 1.1. ¿WHY STUDY EXCLUSION IN HEALTH IN LATIN AMERICA AND THE CARIBBEAN?

The economic reforms implemented during the 1980s and 1990s in the majority of the countries of the world not only did not bring the awaited progress, but also increased poverty, worsened the income distribution and increased the difference between rich and poor during this period. As Sophie Bessis proposes, "The appearance of dual societies, in which extreme wealth lives together with the most abject poverty, seems to be one of the most spectacular consequences of the changes of the 1980s throughout the world."[1]

Evidence of these facts has generated an urgent interest in analyzing the causes that underlie this phenomenon. In addition, the resurgence of poverty (the phenomenon of the "new poor"), the disintegration of the family and the crisis of the Welfare States in Europe, as well as the serious problems of unemployment and the sustained growth of the informal economy throughout the world, have induced the creation of various lines of research and the definition of policies around three central issues: inequity, poverty, and social exclusion.

Current health sector problems have also been addressed with this logic. Thus, lines of work have been generated to analyze and attack the causes of health inequity; to study the impact of poverty on the incidence and prevalence of health problems; and to understand the manifestations of social exclusion in the area of health. The development of these initiatives has generated different lenses to address health problems, each one of them based on some of the following assumptions:

- That the problems of lack of equity in access and use of health services are the leading cause of unjust inequalities in health outcomes.
- That the problems of the health sector fundamentally have to do with a question of quantity and assignment of available resources.

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[1] Bessis, Sophie. *"De la exclusión social a la cohesión social. Síntesis del Coloquio de Roskilde."* UNESCO. Paris, 1995.

- That one of the manifestations of social exclusion, defined as the lack of access to the goods, opportunities, and social relationships enjoyed by others,[2] is the lack of access to health services.

Exclusion in health—understood as the lack of access of certain groups or people to the goods, services and opportunities that improve or maintain their health status and that other individuals and groups in the society enjoy—has to do with all of these factors, but cannot be completely explained by any of them, as will be seen below.

Various studies have proposed the existing differences among the concepts of poverty, social exclusion, and inequity. Sophie Bessis makes an important distinction when asserting that social exclusion is a notion explored in sociology that refers more to integration and insertion, while poverty is a category utilized in the economic arena that is more closely related to the resource gap.[3] Bhalla and Lapeyre propose that the concept of poverty, even in their most recent developments that explore not only the economic but also the social dimension, as in the work of Amartya Sen, has to do with the distributional aspect of resources and opportunities, while social exclusion has to do with the relationship between them.[4] That is, poverty has to do with *deprivation*, while social exclusion has to do with the absence of *membership,* understanding membership as being part of a social network. Thus, poverty does not always imply exclusion. Moreover, poverty is not always a good indicator of exclusion. People can be poor and not be excluded from the satisfaction of certain basic needs and, on the other hand, people may not be poor and may be excluded for other reasons, such as geographical or cultural isolation. For example, Sen demonstrates that countries with different per capita incomes have the same level of achievements in life expectancy and access to social services.[5]

It has been consistently demonstrated that inequity- understood as the existence of unjust and avoidable differences in access to goods, services and opportunities, and that is expressed, in the case of health, in unjust and avoidable differences in health outcomes between various groups within and between countries - is a major cause of poor health and premature death in people who are part of the vulnerable groups in society and contributes considerably to explaining the difference in health outcomes between the poor and the wealthy.[6] Inequity generates exclusion in health.

[2] Behrman, Jere; Gaviria, Alejandro; and Székely Miguel in *"Who's in and who's out. Social exclusion in Latin America."* Inter American Development Bank (IDB), Washington DC, 2003.

[3] Op. Cit. 1.

[4] Bhalla A. S. and Lapeyre Frederic. *"Poverty and exclusion in a global world."* Macmillan Press Ltd. Great Britain, 1999.

[5] Sen, Amartya. *"Development as freedom."* USA, 1999.

[6] Whitehead, M. *"The concepts and principles of equity and health."* In International Journal of Health Services, 1992; 22:429-45 and Wastgaff, A. *"Poverty and health sector inequalities."* In Bulletin of the World Health Organization 2002;80:97-105.

However, exclusion in health can be attributed to causes unrelated to inequity, such as the income barriers of workers in the informal sector to traditional social security systems given their labor situation, or the language barriers that leave millions of people that do not speak the language in which health services are provided outside the system.

The relationship between poverty, inequity, and exclusion can be illustrated as follows:

**Figure 1: Relationship between poverty, inequity, and exclusion**



The difference between social exclusion as a general notion and exclusion in health is not clear in the literature. Social exclusion has been subject to intense analysis and discussion since its appearance as a concept in the socio-political debate in France at the beginning of the 1980s. The emergence of new forms of poverty and marginalization in Europe at the end of the 1970s, and the controversy generated around the characterization of the "new poor," helped to consolidate the notion that the new socioeconomic situation was of a structural and multidimensional nature. It also demonstrated that the new problems were not only related to the lack of material resources and the anti-social behaviors of individuals, but also to other phenomena of a macro-social nature,[7] in particular the change in employment conditions, reduced access to the labor market and so-called "long-term unemployment"; the weakening of family ties and of the family as a social and economic unit; the growth of informal support networks; the increase in and stabilization of migratory movements toward Western European countries; and a significant reduction in social participation in decision-making processes. Thus, toward the end of the 1980s, there was a conceptual shift in Western Europe from the concept of poverty to the concept of social exclusion, which was widely expanded in the following decades. Today, the term is utilized in various contexts and is associated with diverse values and view-

[7] European Commission (1992). "Towards a Europe of solidarity." Commission Communication 542, Brussels.

points.[8] Despite the different approaches to the use of the term on the part of various groups in France, Great Britain, and Sweden, among others, there is consensus in the European Union regarding the idea that social exclusion constitutes a threat to social cohesion in European societies.[9] In general, it is understood in the European Union as a multidimensional structural process that encompasses the precariousness of employment and unemployment on the one hand and the break of social ties produced by the crisis in the Welfare State, the emergence of individualism, and the weakening of basic solidarity networks such as the family on the other hand.[10]

Unlike social exclusion, exclusion in health does not have a specific definition. It could be argued that exclusion in health is only an expression of social exclusion. In fact, most of the literature on the subject presents cases of exclusion in health as an example—among others—of social exclusion. Even more so, some governments incorporate the health component within their policy definitions of social exclusion. For example, the English Government has defined social exclusion as "*what can occur when people or areas suffer from a combination of interrelated problems such as unemployment, lack of skills, low income, poor dwellings, high crime environments, poor health, and breaks in the family structure.*"[11]

Both notions share the dimensions for social exclusion defined by Bhalla and Lapeyre[12] and by Trevor Hancock[13]:

- Economic dimension: those who do not have sufficient economic resources (and these are not necessarily the poor) to face a financial barrier that prevents access to various services, including health services.
- Social dimension: involves a loss of solidarity ties within a community.
- Political dimension: implies the non-exercise or the loss of a right.
- Temporal dimension: in both cases the phenomenon of exclusion is dynamic— and concerns, as Gacitúa and Sojo propose, a process more than a state[14]—and in addition, compromises the survival and quality of life of future generations.

Thus, exclusion in health can be conceived of as a component of social exclusion:

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[8] Silver, Hillary. "Three paradigms of social exclusion" in Rodgers et al. (eds), "Social Exclusion: Rhetoric, Reality, Responses." International Institute for Labour Studies, Geneva.

[9] Spicker, P. "Exclusion." In Journal of Common Market Studies, Vol. 35, Number 1, 1997.

[10] Op. Cit. 1.

[11] Text about the creation of the Social Exclusion Unit by the English Prime Minister, on the British Government's web page on social exclusion.

[12] Op. Cit. 4.

[13] Op. Cit. 1.

[14] "Exclusión social y reducción de la pobreza en América Latina y El Caribe." Edited by Gacitúa, Sojo y Davis. World Bank-FLACSO, 2000.

**Figure 2: Exclusion in health
as a component of social exclusion**



However, there are aspects of exclusion in health that do not involve the element of loss of social integration that is central to the idea of social exclusion and that seem to depend more on variables that are characteristic of the health sector, such as the service delivery model, the assignment of human, technological and financial resources within the sector, and the information level of service users. Asymmetry of information, which is a determining factor in the relationship between health agents, is particularly important as an access barrier when the system consists of intricate interrelationship mechanisms between users, insurers, and providers.

Taking into account these differences, the relationship between social exclusion and exclusion in health could be conceived of as it appears in the following figure:

**Figure 3: Relationship between social exclusion and exclusion in health**

Thus, exclusion in health can be conceived of as a distinguishable entity, which is not possible to explain only through poverty, inequity, or social exclusion.

## 1.2. SOME DEFINITIONS

For the development of this study, exclusion in health was defined as the situation in which an individual or group of individuals does not access the mechanisms that would make possible the satisfaction of health needs. As a result, exclusion in health is understood as the lack of access of certain groups or people to various goods, services and opportunities that improve or maintain their health status and that other individuals and groups in the society enjoy. From this definition, it follows that this is a phenomenon that transcends the health sector.

As occurs with other forms of social exclusion, exclusion in health is often not explicit,[15] but on the contrary, is difficult to characterize. One of the reasons for this is that it is not an all-or-nothing phenomenon, but manifests itself with differing degrees of intensity, from absolute exclusion from the most basic services, to exclusion due to the existence of waiting lists, partial access, or lower quality treatment or technology. It can also take the form of self-exclusion due to poor treatment or service provision in a language that is not understood by or is within a cultural context that enters into conflict with the beliefs of the user. In this context, exclusion in health can be expressed in some of the following situations:

1. *Lack of access to the basic mechanisms for the satisfaction of health needs*: when a minimum infrastructure that allows for provision of health services does not exist or when people cannot access services due to geographical, economic, cultural or other types of barriers.

2. *Lack of access to financial protection mechanisms against the risks and results of becoming ill*: when people cannot access a health insurance program.

3. *Lack of access to the mechanisms for the satisfaction of health needs under adequate conditions of timeliness, quality, and dignity, regardless of ability to pay:* when people cannot access a program for social protection in health.

From a rights perspective, exclusion in health can be defined as the negation of the right to meet the health needs of a person or group of people in a given society. This negation can be total (for all health needs) or partial (for some health needs) and can be temporary or permanent in terms of time.

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[15] "Who's in and who's out. Social exclusion in Latin America." Edited by Jere Behrman, Alejandro Gaviria and Miguel Székely. Inter American Development Bank, Washington DC, 2003.

Based on this analysis, it follows that there are various degrees of exclusion in health, represented by situations in which the individual:

a) Does not access the mechanisms for the satisfaction of his/her most basic health needs.

b) Does not access the mechanisms for the satisfaction of his/her health needs in adequate conditions of dignity, timeliness, and quality.

c) Does not access financial protection mechanisms against the risks of becoming ill and the results of being sick.

Accordingly, the phenomenon of exclusion in health takes place in the interaction that occurs between people's perceived and unperceived health needs and the capacity of the system to respond to those needs. Within this context it can be said that, as the principal objective of health systems is to improve people's health status, the principal function of the health protection system is to guarantee that people can meet their perceived and unperceived[16] health needs in adequate conditions of timeliness, quality and dignity, regardless of their ability to pay.

**Figure 4: Interaction between exclusion and health needs**



Within this conceptual framework, "access" will be understood as the capacity to come into contact with the mechanisms for the satisfaction of health needs. In order for that access to occur, two conditions are required:

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[16] Health needs are defined as "perceived needs" if they correspond to needs that are expressed as a spontaneous demand for health goods or services or as "unperceived needs" if they are not expressed as a spontaneous demand for goods or services and correspond to the definitions of the health authority. In general, perceived needs are associated with insurable goods and unperceived needs are associated with public goods.

a) The individual who has the health need should possess the means for coming into contact with the mechanisms for the satisfaction of that need.

b) The satisfaction mechanisms should be capable of providing the service or good required. For that to occur, a set of three processes needs to be operational: production, delivery, and the availability of the health good or service. Production is the process or preparation of the good; delivery is the process of the transfer of the good from the producer to the provider; and availability is the process by which the good or service is physically placed within the reach of the user, who in this situation is the bearer of the health needs.

There are cases in which the production, availability, and delivery of the good/service are rendered in a single act, as in the medical act. However, in the majority of cases, separate processes of production, delivery (that for many goods involves purchase and transportation), and availability can be identified, as is the case with pharmaceutical drugs.

Deficiencies in the production, delivery or availability of health goods or services constitute major and frequent causes of exclusion in health.

In accordance with the preceding statement, it can be said that the largest deficiency of any health protection system occurs when it is not capable of guaranteeing that health goods or services or the goods or services that indirectly affect health[17] reach all of the people who should benefit from them. This takes place when the system cannot guarantee the delivery of these goods or services to the entire population that, by legal mandate or affiliation, theoretically falls within its coverage range. As a result, from the standpoint of health protection systems, exclusion finds expression in the percentage of the population that requires a good or service but cannot access it and remains outside the operational sphere of the system.

## 1.3. CAUSES OF EXCLUSION IN HEALTH

Exclusion in health is a multi-causal and complex phenomenon that presents major variations between and within countries and whose causes are found both inside and outside of the health sector. One of the aspects that requires in-depth study is the relationship between exclusion in health and other social phenomena such as poverty; inequality between social groups; racial discrimination;

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[17] Note that this definition does not fall within the services traditionally offered by the health sector, but includes a broader group of actions intended to satisfy health needs, such as basic sanitation and drinkable water.

unemployment, underemployment and informal employment; the insufficiency of the support network provided by the State; and the weakening of the family and of community-based social protection networks. It is also necessary to analyze the impact that certain factors characteristic of the health sector itself have on exclusion, such as health expenditures and the structure of health protection systems.

The structure of health protection systems seems to be a decisive element in exclusion. The social health coverage systems that still predominate in the world—social insurance for workers conceived by Bismark and the universal social service delivery system modeled by Beveridge—were drafted under the logic that the well-being of a society's members—especially that of those who are more vulnerable—depends on their social rights[18] as members of the communities to which they belong. In Latin America and the Caribbean, the exercise of these rights is limited by race, gender, language and customs— what Figueroa calls cultural assets—since different cultural assets are appraised according to the historically constructed social hierarchy. Cultural assets provide people with prestige or social stigma, which in turn lead to discrimination. This unequal assessment of cultural assets implies the existence of groups with different social positions in society.[19] In health protection systems, this is reflected in the existence of the phenomenon of segmentation, that is, the coexistence of subsystems with various arrangements for financing, membership and benefits that are specialized for different population segments, usually determined by their income level or social position.

In accordance with the abovementioned, the principal causes of exclusion can be classified as shown in Table 1 (next page).

## 1.4. PREMISES OF THE STUDY

In accordance with the definitions proposed, the study was prepared based on the following premises:

a) Exclusion in health is an entity that is distinguishable and possible to characterize.

b) It is possible to identify indicators to measure exclusion in health.

c) Exclusion in health can be utilized as a measure of the success or failure of the policies designed to improve health status.

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[19] Figueroa, Adolfo. *"La exclusión social como una teoría de la distribución."* In "Exclusión social y reducción de la pobreza en América Latina y El Caribe." Edited by Gacitúa, Sojo and Davis. World Bank-FLACSO, 2000.

d) Health protection systems are not neutral concerning exclusion in health but, on the contrary, can determine various degrees of exclusion depending on their structure. It is possible to identify the elements that determine exclusion within the architecture of a system.

**Table 1: Causes of exclusion in health**

| Cause | Area | Category |
|---|---|---|
| Deficit of adequate infraestructure | a. Provision of health goods/services<br>b. Provision of goods/services not directly related to the health sector, but that affect health | a. Nonexistence or insufficiency of health facilities<br>b. Lack of drinkable water, sewerage systems, roads, transportation, etc. |
| Deficiencies in the assignment and/or management of resources that manifests itself in deficiencies in the production, delivery, or availability of health: goods/services | a. Provision of health good/services<br>b. Provision of goods/services not directly related to the health sector, but that affect health | a. Insufficiency or nonexistence of personnel, drugs, inputs or medical equipment<br>b. Insufficiency or lack of systems for collection of refuse, decontamination of soil, air or water, elimination of vectors, etc. |
| Barriers that prevent access to health care | a. Geographical<br>b. Economic<br>c. Cultural/ethnic (self-exclusion)<br>d. Determined by the employment condition | a. Human settlements in remote or geographically poorly accessible sites<br>b. Inability to finance health care<br>c. Health care is delivered in a language or in a modality that is not understood by the user or that is in conflict with his/her belief system<br>d. Underemployment, informal employment, unemployment |
| Problems related to the quality of the services provided (that can, as with the ethnicity variable, result in self exclusion) | a. Problems associated with the technical quality of care<br>b. Problems related to the quality of the treatment and to the place where the health care is carried out | a. Errors in diagnosis/treatment, utilization of inapropriate inputs<br>b. Poor treatment for the public, discrimination in care, establishments in poor physical conditions |

# METHODOLOGICAL FRAMEWORK

## 2.1. STUDY OBJECTIVES

The objectives of the study were:

1. To quantify the percentage of excluded population.
2. To identify the principal sources of exclusion.
3. To identify the profile of the population that is excluded from health.
4. To identify the areas in which the excluded population is concentrated

## 2.2. FACTORS RELATED TO THE MEASUREMENT OF EXCLUSION IN HEALTH

The measurement of exclusion in health is a complex process for various reasons. The principal difficulty in measuring exclusion in health is based on three factors related to its nature:

a) It is a **multi-causal** phenomenon, that is, there are multiple sources of exclusion generation (poverty, ethno-cultural discrimination and restrictions in the supply of services, among others) that interact with one another, producing different levels or intensities of exclusion in a country's population. For example, the degree of exclusion of a poor person without health insurance that lives in an urban area will be different than that of a person with similar economic conditions that resides in a rural area and is of indigenous origin.

b) It is a **heterogeneous and geographical** phenomenon, that is, it tends to have a differential effect on individuals or households both at an intra - and interregional level. Thus, for individuals from a given country, the problem of exclusion can be linked to problems of economic access barriers; while for people from another country, the principal source of exclusion could result from limitations in the supply of health services. Furthermore, heterogeneity refers to the existence

of important gradients in the exclusion in health situation between and within countries. Thus, population groups can be observed that are completely excluded from the care that the system as a whole delivers and, more frequently, population groups can be observed that have partial access to certain health services at certain time periods but do not have access to other health care that they demand and/or need. This aspect is important to consider, because it is usually masked by national or regional averages.

c)  It is a **dynamic** phenomenon, that is, it affects the population variably over time, requiring continuous revisions of the statistical systems for: classification of the population according to its condition of access to health systems; and successive measurements over time. Thus, there are non-poor individuals or homes without insurance or with partial coverage, which under certain stable conditions can have access to health services or not be classified as excluded. In light of unexpected events (catastrophic diseases, unemployment, etc.), however, they could reverse their initial situation, with the risk that these changes are not reflected in the information available about the exclusion situation.

The methodological challenges posed by these characteristics are summarized in table 2 on the following page.

Another factor that hinders the measurement of exclusion in health is that, given that exclusion is not incorporated as a category in the usual analysis that is carried out in the health sector, instruments are not available for measuring it. The indicators traditionally utilized to analyze health status aim to measure what occurs with people that access the health system and do not allow for learning about the reality of those who remain outside the system. As a result, an important challenge has to do with the generation of indicators to measure the exclusion in health.

## 2.3. Methodology utilized for the country studies

### a) Description of the instrument

With the objective of attempting to overcome the difficulties presented by the characterization of exclusion in health, a methodological guide that contains qualitative and quantitative data collection techniques was prepared. Its principal elements are:

1. A definition of the information sources to utilize.
2. Questions for key informants.
3. A set of indicators to measure exclusion in health.
4. Formats for presentation of the information.

Methodologically, the quantitative technique implemented consists of independently identifying the excluded population in each one of the analytical dimensions and for each one of the causes of exclusion (*head count*). Given that it concerns a multi-causal phenomenon that cannot be quantified with a single measure, a set of indicators is required to carry out the measurement. One of the problems that this technique presents is that it can generate an excessive list of measurement indicators. This leads to the need to rank the indicators according to their ability to describe the phenomenon.

Another limitation of this technique is that it does not consider the interactions among the causes or sources of exclusion or differences in the degree of exclusion in a country's population. From this perspective, each exclusion indica-

**Table 2: Methodological challenges presented
by the measurement of exclusion in health**

| Characteristic | How it is presented | Consequence | Methodological challenge |
|---|---|---|---|
| Multi-causal | Exclusion in health appears to be related to various determinants of health status | Many of their causes, and possibly their origins, are found outside the health sector | a. It is difficult to measure: technical challenge of devising adequate indicators<br>b. It is difficult to establish the relative weight of each determinant<br>c. It is difficult to establish causal relationships<br>d. The indicators for the identification of the phenomenon can differ from the indicators for the prevalence of the phenomenon |
| Heterogeneous | Various degrees of exclusion can be observed in different population groups | Excluded population groups can exist that remain "hidden" behind the averages | a. The socio-demographic, territorial, and cultural approach should be considered<br>b. Is important to carry out measurements at sub-national and local levels, taking into account the various aspects of exclusion in health |
| Dynamic | Affects the population variably over time | Changes in the exclusion situation will not be reflected if the measurement does not repeat itself over time | a. Requires continuous revisions of the statistical systems for the classification of the population according to its condition of health systems access<br>b. Requires successive measurements over time |

tor is segmented (for every dimension and source of exclusion) and discrete (the population is classified into two categories, excluded and non-excluded), which tends to skew the measurement of the excluded population.[20]

Despite the limitations described, the decision to utilize this technique for the country studies was made for two reasons:

a)  It provides baseline information and is a good starting point to begin the analysis.

b)  It makes it possible for the measurement of exclusion in health to be carried out by national teams without having to resort to sophisticated techniques. This makes it possible for exclusion in health to be routinely measured, not only at the national level but also at the sub-national and local levels, in the future.

For the purpose of correcting the measurement biases indicated above, each country study was complemented with an analysis based on the calculation of a continuous indicator of exclusion, whose methodological foundations are described later.

### A.1)  SELECTION OF INFORMATION SOURCES

Given the nature of the phenomenon that is going to be measured, the objective was to obtain the information that came closest to the real dimension of the problem, which is why household surveys were devised as the principal information source. However, these present certain limitations that it is necessary to consider:

a)  They do not necessarily cover the most affected populations.

b)  They do not directly investigate exclusion in health.

c)  In the event that they investigate exclusion, the responses are based on the respondents' perceptions, which may or may not reflect the actual situation.

For this reason, a comparison of the household survey data with other reliable sources from the countries themselves was recommended. A problem that emerged during research was the lack of availability of up-to-date and reliable secondary data sources from the individual countries. As a result, secondary data sources validated by international organizations such as PAHO/WHO, the World Bank, the UNDP and the IDB were used for information not found in the household surveys.

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[20] The vision of the excluded population that is obtained with the *head count* is not global, but is instead a mosaic or a presentation of partial aspects, varying according to the indicators adopted to make each one of the categories and sources of exclusion operational.

### A.2) DEFINITION OF INDICATORS

In accordance with the established definition, exclusion in health can be expressed as the *lack of access, quality and utilization of diverse services* that directly or indirectly affects people's health status. An indirect approach to investigating exclusion is to analyze certain *processes* that culminate in the supply of these services. Finally, the impact that exclusion in health has on the population's health *outcomes* could also be studied.

Taking into account the aforementioned, simple quantitative indicators that are currently utilized for other objectives were selected. Indicators corresponding to four different categories, *characteristic of the health sector (internal)* as well as *external to the health sector,* were selected:

a) Coverage indicators.

b) Indicators of access to services.

c) Indicators linked to the process of service care or delivery.

d) Health outcome indicators.

Some of the indicators selected coincide with the set of indicators for measuring social exclusion devised by Bhalla and Lapeyre, which includes three aspects: social, cultural, and political. The indicators proposed by these authors are:

a) Economic dimension: The Gini index and the index by Sen (1976) or Foster et al (1984). The last two identify degrees of poverty and the distribution of households according to different degrees of poverty.

b) Social dimension, three groups of indicators:

1. Indicators of access to public goods and services (education and health), such as life expectancy at birth, infant mortality, the illiteracy rate, and the enrollment ratio in secondary education.

2. Indicators of access to the labor market (the unemployment rate, the long-term unemployment rate, the percentage of informality, and the percentage of workers with a second job).

3. State indicators for social fabric and social participation (the percentage of affiliation to unions and to local organizations aimed at incorporating vulnerable or marginal groups, the percentage of homeless people, the crime rate, and the percentage of drug abuse in a community).

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[21] Op Cit 4.

c) Political dimension: The index of political freedom by Dasgupta (1990, 1993) or by the UNDP, specifically the UNDP human development index.

The indicators selected for the study were the following:

**Table 3: Indicators of exclusion in health**

| Category | Indicator |
|---|---|
| **Coverage** | - Met demand<br>- Percentage of the population not covered by health insurance<br>- Hospital discharges per 1,000 inhabitants<br>- First health visit during a year |
| **Access**<br><br>Economic | - Percentage of population under the poverty line<br>- Out-of-pocket expenditure as a percentage of GDP<br>- Out-of-pocket expenditure as a percentage of total health expenditure<br>- Out-of-pocket expenditure as a proportion of total household expenditure, by income quintiles<br>- Public spending in health as a percentage of GDP<br>- Public spending in health as a percentage of total health expenditure<br>- Distribution of public spending in health by income quintiles<br>- Percentage of workers in the informal sector in comparizon to the total mass of workers |
| Geographical | - Percentage of rural population that lives at more than one hour from a primary care center with adquate problem-solving ability<br>- Percentage of the urban population that lives at more than 30 minutes from a primary care center with adequate problem-solving ability<br>- Geographical dispersion/population density per territorial unit |
| Ethnic/Cultural | - Percentage of population of indigenous origin or African descent not regularly covered by a basic package of health services |
| **Infrastructure** | - Number of doctors/nurses per every 1,000 population<br>- Percentage of coverage of the health network<br>- Geographical distribution of the network of care<br>- Level and distribution of hospital beds per inhabitant<br>- Percentage of population without access to drinkable water/sewerage system |
| **Processes** | - Percentage of deliveries attended by trained personnel or proportion of institutional deliveries as applied to the total population<br>- Proportion of pregnant women who do not reach the standard number of prenatal check-ups<br>- Dropout rate between the BCG vaccine and the vaccine with the lowest percentage of coverage<br>- Percentage of population without access to a sewerage system or drinkable water |
| **Results** | - Maternal mortality by income quintiles; due to geographical location (urban/rural); due to ethnic origin<br>- Infant mortality by income quintiles<br>- Years of life lost due to disability by income quintiles |

*Source: "Guía metodológica para la caracterización de la exclusión en salud". C. Acuña, B. Andersson, H. Rosenberg, OPS-HSP, 2001.*

### A.3) ANALYSIS OF HEALTH SYSTEMS

For the purpose of complementing the characterization of exclusion in health in each country, an analysis of the existing health protection systems was performed, incorporating the public health subsystem and the Social Security system, as well as private providers and insurers, both non-profit and for-profit. This

decision was based on the premise that health protection systems are not neutral concerning exclusion in health but, on the contrary, can contribute to various degrees of exclusion depending on their structure and organizational arrangements.

In this context, four elements that contribute to the existence of exclusion within these systems were identified and investigators were asked to evaluate the degree to which these elements were present in the health protection systems of each country. The aforementioned elements are:

a) **The segmentation** or existence of subsystems with distinct financing, affiliation, and provision arrangements, "specialized" according to various segments of the population, which are determined by their income level and social position. This is habitually manifested in a public subsystem—with insufficient resources and/or poor administration—directed to the poor and indigent, and in a private sub-sector—with greater resources and oriented at the client—concentrated on the wealthiest segments of the population. Between the two lies the Social Security system, specialized in formal workers with contracts and that also covers their families in some cases. This type of institutional arrangement consolidates and deepens the inequality in health access among different population groups and is an exclusion factor in health because in a highly segmented scenario, the poorest, uninformed and least powerful in society remain outside the system.

b) **The fragmentation** or existence of many non-integrated entities in a subsystem. This situation raises the transaction costs within the system and makes it difficult to guarantee equivalent conditions of care for the people affiliated with the various subsystems.

c) **The predominance of direct or out-of-pocket expenditure** as the financing mechanism for the system, since it makes the possibility of receiving required health care to depend on the ability-to-pay of each person or family.

d) **Weak regulatory** or poorly developed **systems** that prevent the establishment of fair game rules in the relationships among the agents of the system (users, suppliers, insurers).

The relationship between these factors is shown in figure 5.

## b) Definition of the sample

The countries selected to conduct the study were Ecuador, Guatemala, Honduras, Peru, Paraguay, and the Dominican Republic. Mexico City was also incorporated, although its status as a sub-national unit grants it special characteristics that created difficulties during study implementation, hence its results are not presented in this publication.

Although the selected countries face varying degrees of economic development, poverty, and development of the health system and health market, they also share important experiences of instability in economic growth, political turbulence and social exclusion.

**Figure 5: Health protection systems and exclusion in health**



## 2.4. METHODOLOGY UTILIZED FOR THE COMPARATIVE ANALYSIS

Two information sources were utilized for the comparative analysis:

a)  The result obtained in the country studies carried out by the national teams.

b)  An econometric analysis of the exclusion in health variables in the countries.

The methodology utilized for the econometric analysis is presented below.

### 2.4.1. ECONOMETRIC ANALYSIS OF THE EXCLUSION IN HEALTH VARIABLES

#### A) FOUNDATIONS

As proposed in the previous paragraphs, the techniques that independently identify the excluded population (*head count*) in each one of the analytical dimensions and for each one of the sources or causes of exclusion, do not consider the interactions among these sources and the differences in the degree of exclusion in a country's population. Due to this limitation, its results are not conclusive enough to carry out intra- and interregional comparisons.

In order to overcome this problem, a methodology based on the construction of a ***composite index of exclusion*** was utilized for the comprehensive measurement of the excluded population. In this methodology, exclusion is evaluated using the calculation of a continuous indicator of exclusion based on the family of measures proposed by Foster, Greer, and Thorbecke, 1984, which incorporates the following analytical elements:

1. ***Incidence of exclusion:*** How much of the population is found to be excluded?

2. ***Intensity of exclusion:*** What is the degree of exclusion in the population reported as excluded? How large is the gap between the current situation and the optimal situation of non-exclusion?

3. ***Severity of exclusion:*** What is the degree of inequality among the levels of exclusion in the population?

The continuous indicator incorporates the interactions among the different sources of exclusion as well as the group of restrictions that individuals face in order to access the mechanisms for satisfaction of their health needs. This indicator is constructed as a linear combination of the different sources of exclusion and reveals *the individual exclusion risk*.

The advantage of having a continuous indicator is that it permits the stratification of the population, segmenting it into relatively uniform groups, in terms of risks. Such stratification was carried out utilizing the *clusters* method. This method determines the thresholds and permits the classification of the population into various risk categories, which are obtained through the minimization of the Euclidian distance from the composite index to the interior of the four devised risk groups: severe, high, moderate, and low.

Stratification is useful since it makes it possible to spatially order the population according to exclusion risks and identify the most affected geographical areas.

In this scenario, the global index reflects both the incidence of exclusion (magnitude of people) and its intensity and can be interpreted as the potential effort required to eliminate exclusion through diverse interventions.

The **index of exclusion** can be expressed as:

$$I_\alpha = \Sigma_{j=1}^{m} (n_j / n) \ I_{\alpha j}$$

Where
$I_a$ = index of global exclusion
$I_{aj}$ = index of exclusion for group j
$n_j$ = number of individuals belonging to subgroup j
$n$ = total population
$m$ = total number of population segments

### *Range of values of the index*

Theoretically, the values of the exclusion index range from 0 (no exclusion) to 1 (total exclusion). For purposes of the analysis, the following criteria for the classification of exclusion risk are utilized:

- Mild (values lower than 0.15).
- Moderate (values between 0.15 and 0.25).
- High (values between 0.25 and 0.5).
- Severe (values higher than 0.5).

### b) APPLICATION OF THE METHOD

The analysis was carried out in four of the six countries in the study that had more complete information sources. These countries were Ecuador, Honduras, Paraguay, and Peru.

In order to estimate the index of exclusion, the four components that devise the global index were calculated for each country: (a) the *head-count*, referring to the percentage of the population that is excluded, as measured by the defined set of indicators; (b) the exclusion gap for each one of the dimensions and sources of exclusion; (c) the considerations for each one of the analytical dimensions and (d) the variability coefficient of the degree of exclusion.

The procedure for estimating the global index took the indicators utilized for the *head count* as a starting point and calculated the partial population excluded for each of these indicators. The relationships of the indicators as well as the criteria for classification of the excluded population utilized in the sample of selected countries are shown in table 4, below.

***The exclusion gap*** measures the distance from the level of exclusion (S) of an individual to the optimal level, referred to as a non-exclusion situation (S *), which requires that the levels or degrees of exclusion be expressed in cardinal values. In order to reconcile these requirements with the type of information provided by the surveys for each indicator representative of the sources of exclusion, which are reported as qualitative values, the methodology for the calculation of a gap based on optimal scales was utilized (Grosh, M. and J. Baker (1995), Oaks, M. (1998).

This methodology approximates the average exclusion gap of a country (B) starting from: (1) a weighted average of the partial exclusion gaps of each one of the dimensions and sources of exclusion and (2) the transformation of each possible qualitative response that the individual reports into a cardinal value ($S_i$), with the transformed value for the better qualification response corresponding to that for non-exclusion ($S^*_i$).

Principal component algorithms were applied for the estimate of weights, and optimal scale algorithms were applied for the transformation of categorical into numerical scales. Both sets of parameters were estimated in an integrated way utilizing the alternating least squares method. The advantage of introducing a metric to the nominal variables is that it makes it possible to give each category a differentiated value according to its contribution at the level of individual exclusion.

It is noteworthy that the indicators analyzed are calibrated in the same direction, that is, for all of them, a high value implies high exclusion for that cause and vice versa.

In order to prevent the distortion provoked by the comparison of the exclusion dimensions between countries with various population sizes, the size of the excluded population in absolute and proportional terms was considered in each measurement.

A detailed explanation of the methodology and its application can be found in Annexes B and C.

### c) INFORMATION SOURCES

The following information sources were utilized for the calculation of the global index of social exclusion in each country analyzed:

1. Ecuador: Living Conditions Survey 1998, prepared by the National Institute of Statistics and Censuses.[22]
2. Honduras: The Multiple Purpose Household Survey (EHPM), carried out by the National Institute of Statistics.
3. Paraguay: The Permanent Household Survey 1999, prepared by the General Directorate of Statistics.
4. Peru: The National Household Survey (ENAHO) - IV quarter of 2001, prepared by the National Institute of Statistics and Informatics.

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[22] The complete files from the survey mentioned were not available in the case of Ecuador, which is why the results presented will be of a referential nature.

## Table 4: Excluded population by diverse dimensions and sources of exclusion

| Dimensions of exclusion | Source of exclusion | Category | Indicator | Peru Population | Peru % of population | Ecuador Population | Ecuador % of population | Paraguay Population | Paraguay % of population | Honduras Population | Honduras % of population |
|---|---|---|---|---|---|---|---|---|---|---|---|
| External to the health system | | Economic or financial | Population in poverty situation | 13,861,347 | 54% | 7,666,392 | 61% | 1,900,430 | 33% | 4,137,551 | 63% |
| | | | Population in extreme poverty situation | 3,798,740 | 15% | 2,709,022 | 21% | 873,806 | 16% | 3,060,105 | 47% |
| | | | Population without health insurance | 19,326,701 | 72% | 9,192,510 | 77% | 4,507,473 | 80% | 5,432,546 | 83% |
| | | Geographical | People who live in places that are far from a health establishment | 2,862,411 | 11% | 493,381 | 4% | n.a. | n.a. | n.a. | n.a. |
| | | | Rural population | 8,937,804 | 33% | n.a. | n.a. | 2,599,118 | 44% | n.a. | n.a. |
| | Access barriers | Work related | Non-salaried population + dependent population without a contract[1] | 9,771,495 | 56% | n.a. | n.a. | 495,336 | 64% | 1,305,941 | 56% |
| | | Gender | People that seek care in relation to a declared illness, differentiated by gender | | | | | | | | |
| | | Ethnic | Population that belongs to an ethnic minority group[2] | 4,222,602 | 16% | 687,453 | 14% | 2,420,610 | 42% | 653,736 | 10% |
| | | Supply of indirect services | People that lack water services | 9,687,237 | 41% | 2,783,178 | 22% | 800,392 | 14% | 1,895,250 | 29% |
| | | | People that lack sewerage services | 13,552,161 | 59% | n.a. | n.a. | n.a. | n.a. | 1,110,615 | 24% |
| | | | People that lack electricity services | 8,695,852 | 33% | n.a. | n.a. | 667,440 | 12% | 2,025,957 | 31% |
| Internal | Structure | Infrastructure | Shortage of beds[3] | 5,141,885 | 20% | 2,783,178 | 22% | 3,404,777 | 61% | 4,444,034 | 68% |
| | | | Exclusion from III level public establishments (greater level of complexity) | 4,377,164 | 17% | n.a. | n.a. | n.a. | n.a. | 0 | 0% |
| | | Human capital | Shortage of doctors[2] | 7,169,301 | 28% | 885,557 | 7% | 3,436,949 | 61% | 1,045,655 | 16% |
| | Processes | Supply of direct services | Non-institutional births | 8,975,480 | 33% | n.d. | n.d. | 8,975,480 | 33% | 2,981,036 | 46% |
| | | | Interruption in the immunization program | 5,642,662 | 21% | 3,217,199 | 26% | 5,642,662 | 21% | 1,065,590 | 16% |
| | | | Pregnancies with below-standard number of check-ups | 6,258,202 | 24% | n.a. | n.a. | n.a. | n.a. | 1,340,159 | 21% |
| | | Quality | Population at risk of self-exclusion due to insatisfaction with services | 2,611,521 | 11% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |

Note: n.a. = not available.
1/ The percentages of population are expressed in relation to the EAP.
2/ This assumes a norm of 1 doctor per every 1,000 inhabitants.
3/ This assumes a norm of 2 beds per every 1,000 inhabitants.
Source: Report on exclusion from each country, PAHO 2003.

# RESULTS BY COUNTRY

This chapter presents the principal results of each country study, including economic, social and health data that help to provide a context for exclusion in health in each country. Subsequently, the exclusion overview is described briefly, including a profile of the excluded population according to the information obtained at the national level.

It is necessary to specify that each national team had the freedom to orient its study in accordance with the availability and quality of the existing information and with its own characteristics, using the "Methodological Guide for the Characterization of Social Exclusion in Health," designed and contributed to by the PAHO/WHO team in Washington, DC, as a foundation. This explains some of the differences with regard to the presentation of the information and data contributed by each country. Such differences, however, do not detract from the comparability of the study, as will be seen in chapter 4.

The national teams did not have any significant difficulties in utilizing the proposed methodology. During the course of the research, two national teams (Ecuador and Peru) made an additional effort in the quantitative analysis and prepared composite indices of exclusion in health based on the indicators contained in the list. The Peruvian team also incorporated the technique of focus groups into the qualitative component in order to expand the characterization of the phenomenon.

The results are presented below by country.

## 3.1. ECUADOR

### 3.1.1. GENERAL DATA

In accordance with the United Nations categories, Ecuador is registered as a country of average human development. In 1990, it ranked 56th out of 130 countries; in 1999, it held 72nd place out of 174 countries, showing its decrease in terms of human development achievements, with a tendency to decline. In 1999,

the GDP presented a strong decrease (7.3%); in 2001, the country saw growth of 5%, which implies a light economic recovery. Furthermore, income distribution has worsened over the last five years, leading to the classification of the country as one of the most inequitable in the world.

The data indicate that poverty increased starting in 1998 due to increased inflation and unemployment and the decline of real wages that followed the financial crisis. In 1999 and 2000, poverty affected almost half of the population (46%); the region of the Coast was most affected (49%), as well as the Sierra (36%). At the end of 2000, urban poverty slowed and declined to 43%.

**Table 5: Principal economic and social indicators, Ecuador**

| Indicators | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|
| GNP (in millions of dollars) | 18,006 | 19,157 | 19,760 | 19.710 | 13.769 | 13.921 | 17.119 |
| Per capita GNP | 1,564 | 1.627 | 1,655 | 1.723 | 1.109 | 1.100 | 1.329 |
| Percentage of annual growth | 2.3% | 2.0% | 3.4% | 3.5% | -7.3% | 2.0% | n.d. |
| Percentage of annual inflation | 22.8% | 25.5% | 30.7% | 43.4% | 60.7% | 96.4% | (*) |
| Percentage of unemployment (open) | 6.9% | 10.4% | 9.2% | 11.5% | 14.4% | 9.0% | n.d. |
| Social Spending by the State (% of GDP) | 4.4% | 4.4% | 4.4% | 5.9% | 5.1% | 4.3% | 5.8% |
| Social Spending (% of Public Spending) | n.d. | 36.0% | n.d. | 29.0% | 19.5% | 17.1% | 20.0% |
| Public Spending on Health (% of GDP) | 1.1% | 1.0% | 0.8% | 0.9% | 0.5% | 0.6% | 0.8% |

*Note: n.d. = no data. (*) The Governmental Economic Plan foresees an inflationary value below 30% by the end of 2001. Sources: "Sistema Integrado de Indicadores Sociales del Ecuador (SIISE)," "Informe de sobre el Desarrollo Humano en el Ecuador," published by the UNDP in 1999, and the Database of the "Cámara de Comercio de Quito".*

This situation has affected the health of the population in different ways, both in the increase in morbidity and in the severity of the various problems. Furthermore, the financial contraction was reflected in public budgets and at the same time, decreased the universe of contributors to social security, which caused the possible responses to these problems to confront serious difficulties.

This panorama makes it necessary to explore further into the study of the status of exclusion in health in Ecuador, in a manner that makes it possible to face the future with instruments that allow for the best optimization of society's available resources.

Thus, the first phase of the "Social Protection in Health" Project, sponsored by PAHO/WHO and the Swedish Agency for International Development, has been an opportunity to think, diagnose, and demonstrate the need for urgent responses to the situation in Ecuador.

### 3.1.2. OVERVIEW OF EXCLUSION IN HEALTH

The System for Social Protection in Health in Ecuador is understood as the group of institutions that carry out health-related health actions, which are characterized according to the following table:

**Table 6: Summary of the characteristics of the System**

| Fragmentation and segmentation |
|---|
| - Fragmentation in the functions of the system in high and is more serious still because there is also fragmentation within the institutions, which hinders the coordination and construction of any type of health system as well as coordination with other sectors and institutions that carry out health actions.<br>- Segmentation corresponds to the target populations of each subsystem both in terms of care and insurance. The public sector provides care for poor and middle-income people, but those in extreme poverty are not covered appropriately.<br>- Both the fragmentation and the segmentation of the system are variables that negatively influence social protection in health. There is a duplication of resources and interventions, which are not sustainable since there are important challenges in terms of care coverage. The deficit is 21.7%; and 77.3% of the population does not have health insurance coverage. |
| **Out-of-pocket expenditure** |
| - In 1997, direct household expenditure was 46% of the Total Health Expenditure, which represents 2% of GDP, or more than 341 million dollars. Its distribution by income quintiles shows a regressive pattern, since spending is greater in the poorer quintiles. |
| **Regulation** |
| - Incipient regulatory framework. The Ministry of Health has a weak steering role, with health governance problems (weakness in terms of coordination and in terms of both strategic and operative consensus). |
| **Separation of functions** |
| - There is no separation of functions within the institutions of the health sector. This mechanism is established in the proposal for Health Reform by the Social Security system. |

Ecuador currently has an Integrated System of Social Indicators (SIISE) that is a product of a joint effort of the Ministries of the Social Front, the National Institute of Statistics and Censuses, the National Women's Council, the National Child and Family Institute and other governmental and nongovernmental institutions in the social sector. This system provides information on varied issues: the satisfaction of basic needs, inequality and poverty, population, the economy, and the environment.

The function of these efforts has been the possibility of increasing the effectiveness of social programs to direct their actions at specific population groups, that is, to establish mechanisms for targeting interventions. *To target* implies

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[23] Ministerio de Salud Pública, Ministerio de Educación, Ministerio de Bienestar Social (Secretaría Técnica del Frente Social), Ministerio de Vivienda, Ministerio el Trabajo y Recursos Humanos, INFA, CONAMU.

concentrating the investment in a selected population according to designated characteristics with the goal of increasing the potential impact per beneficiary. The most suitable mechanism depends to a great extent on the type and scale of the benefits involved.

In general, the following targeting mechanisms can be distinguished:

- Geographical targeting.
- Targeting by type of beneficiary.

The territorial targeting carried out by the Social Front establishes:

- Priority 1: census areas of the cantonal head and rural parishes of the canton where 80% or greater of the population is poor.
- Priority 2: census areas of the cantonal head and rural parishes of the canton where between 60 and 80% of the population is poor.
- Priority 1: census areas of the cantonal head and rural parishes of the canton where between 40 and 60% of the population is poor.

As an additional criterion, in the case of the affected cantons, the degree of the effects of the El Niño phenomenon was classified in the following way:

- Type 1: little affected.
- Type 2: poverty above 70% and limited effects of the disaster.
- Type 3: high poverty (60% with a considerable number of disaster victims).
- Type 4: strongly affected by the natural disaster according to the number of deaths, destroyed dwellings, students who stopped attending classes and population evacuated.

In order to present the profile for social exclusion, risks, and vulnerability in health, a discussion on exclusion and social management of risk was first carried out. It was considered appropriate to establish a matrix of risks and vulnerability in health to guide the preparation of the profile. It was furthermore agreed that exclusion is a category that is centered around having access to health services, that is, it is a consequence. As a result, what is important is the definition of the magnitude of the risks and of vulnerability in health that makes it possible to identify not only the exclusion but also the intervention priorities in specific populations.

The core data that has been utilized for the preparation of the profile on exclusion risks and vulnerability in health is from the SIISE, with updates carried out to July of 2001. While this data should serve for policy-making and interventions in all social areas, particular needs in the different social arenas should be investigated in a specific manner.

Despite the fact that the Living Conditions Surveys are the most suitable instrument for these effects, in Ecuador they cannot be differentiated by commu-

nity and by canton, since their representativeness only reaches regions, large cities and urban-rural dimensions. The last available survey is from 1998. Although the 1999 data is currently being processed, access is still not completely possible, since the refinement of its databases is not complete. For this reason, other available information sources had to be incorporated to present the profile on Ecuador.

In the case of health and based on the matrix of risks and vulnerability in health, other indices have been constructed in order to determine the rural communities (*parishes*) in which risk, vulnerability and social exclusion in health is greater.

Health is a social product determined not only by the action of the health services; as a result, the sources of risk that produce vulnerability are multiple, and one of those risks is exclusion (lack of access to health services). Drafting a profile that adequately identifies this complexity has motivated the use of both single variable indicators and the correlation of several variables, the construction of which is a methodological challenge. Multiple studies have estimated the appraised weights of the health determinants, which is the starting point for attempting to construct synthesis indicators in the country.

### Methodology

An *integrated index* for establishing social risk in health (risks, vulnerability and exclusion) was constructed using the available information, through the integration of some of the identified variables, while making operational use of the risk and vulnerability matrix in health developed in the discussions with the project advisory group.

The following scheme shows the construction of this index:

**Figure 6: Integrated index - Social health risk**

This integrated index is made up of:

a) Percentage of poverty (extreme poverty is not taken into account).

b) Index of exclusion: The multivariate index of education (EMI) is a measure that summarizes the various dimensions of the educational process, which is estimated through the principal components statistical method, a technique that transforms a set of variables into a new measure that represents the majority of the information contained in the original group. The index is estimated for each canton of the country based on the following indicators:

- Percentage of the population over 15 years of age that knows how to read and write.
- Average years of general schooling for those over 24 years of age.
- Percentage of the population over 24 years of age that has one or more years of superior instruction.
- Percentage of children from 6 to 11 years of age enrolled in educational establishments.
- Percentage of children from 12 to 17 years of age enrolled in educational establishments.
- Percentage of people from 18 to 24 years of age enrolled in instructional centers.

  The multivariate index of health supply (IOS) is a measure that summarizes the various dimensions of the supply of health services in the country's parishes and cantons. It is estimated using the principal components statistical method based on the following indicators:

1. Physicians who work in health facilities (rate per every 10,000 population).
2. Health workers, excluding physicians, who work in health facilities: dentists, obstetricians, nurses and nursing assistants (rate per every 10,000 population).
3. Health facilities without hospitalization (rate per 10,000 population).

c) The index of social vulnerability (IVS) is a composite measure that summarizes five dimensions of the risks or vulnerability of the population in the country's cantons: adult illiteracy, child malnutrition, poverty in household consumption (extreme poverty), mortality risk in children under 1 year of age, and the presence of rural ethnic communities. The IVS is presented on a scale from 0 to 100, where the greatest value in the distribution represents the canton with greater social vulnerability, and the lowest value, that with the lowest level.

The IVS is calculated using the following formula:

$$IVS = a * Illiteracy + b * chronic\ malnutrition + c * incidence\ of\ poverty + d * risk\ of\ infant\ mortality + e * ethnicity + Fc$$

Each index indistinctly proposes 100 to 0 for greater and lesser deficiency, which means that indices a, b and c have been reclassified, and according to their location in the different quintiles, have received a scoring of 1 to 5. In all cases, a score of 5 is equivalent to the greatest deficiencies or lowest supply, or to the greatest vulnerability, and a score of one is equivalent to the lowest in each one of them, in order to normalize each individual index and be able to construct the integrated one.

The index of social exclusion is constructed by multiplying the values between 1 and 5 obtained for the original multivariate indices: of education and of the supply of health services classified by quintiles.

The integrated index of risk, vulnerability, and exclusion is constructed using the total of the indices of poverty, exclusion, and vulnerability once they have been amplified so that each of them has a relative weight of 20%, 40%, and 40%, respectively.

This relative weight has been taken from studies that have managed to establish appraised weights for the influence of socioeconomic, environmental, lifestyle and health service factors, in the determination of the health status of human groups.

In the construction of the integrated index, it may sometimes appear that the same logic in which the greatest values correspond to better relative conditions of what is being measured does not hold. For example, if poverty is measured and is expressed as the percentage of poor in relation to the total population, the cantons that have the greatest values for percentage of poverty will end up being located in the fifth quintile. There is also an apparent contradiction in the process of assessing the other indicators; for example, the index of health supply that is expressed through percentages, given that in this case superior values (100) correspond to better health service offerings. If equivalencies are carried out in order to transfer it to a value that follows the same logic as for poverty, it may happen that the cantons that have the lowest levels of service offerings could end up being located in the fifth quintile.

### 3.1.2. OVERVIEW OF EXCLUSION IN HEALTH AND PROFILE OF THE EXCLUDED POPULATION

Ecuador faces an unprecedented macroeconomic crisis with regard to its complexity and strength, whose immediate causes include the El Niño natural

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[24] Hidalgo A., Corugedo I., Del Llano J. Economía de la Salud. Ediciones Pirámide. Madrid, Spain, 2000.

disaster in 1997-1998, variations in oil prices, weak fiscal management, and dollarization and the banking crisis, which has had a dramatic social impact.

For the analysis, the study counted on the support of the Integrated System of Social Indicators (SIISE), the results of a joint effort by the Ministries of the Social Front, the National Institute of Statistics and Censuses, the National Women's Council, the National Child and Family Institute, and other governmental and nongovernmental institutions in the social sector. The SIISE provides information on diverse subjects: the satisfaction of basic needs, inequality and poverty, population, the economy, and the environment.

For health, risks are identified at the structural level and derived from social exclusion in health. The following variables were identified as the most important, in descending order:

- Poverty, especially extreme poverty.
- Income: 80% of the population receives less income as a whole than the remaining 20%.
- Ethnic groups, especially those located at the rural level; there are geographical areas that are the most affected.
- Insufficient network of basic services (basic sanitation, education and health services), with greater vulnerability for the poorest and most vulnerable parishes.
- Regressive out-of-pocket health expenditure; the three poorest deciles (1, 2, 3) spend 39.8%, 22.4%, 17.6% of their income on health. The national average is 10.5%.
- Low public expenditure in health.

The zones with greater risk, vulnerability, and exclusion are the central provinces of the Ecuadorian sierra, in which the majority of the country's poor cantons and parishes are concentrated, in addition to the larger factor that these are also the provinces with a greater magnitude of indigenous population. Another problem area is the northeast, where risks derived from Plan Colombia add to the challenges.

Ecuador's health protection system is highly fragmented, with a deficit of health care coverage of 20.7%, with 76% of the population lacking any type of insurance, with regressive household private expenditures, and with a weak steering role on the part of the Ministry of Health due to governance problems (weakness in coordination and in both strategic and operative consensus). Acknowledging this reality implies that we need to establish levels of coordination and

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[25] Ministerio de Salud Pública, Ministerio de Educación, Ministerio de Bienestar Social (Secretaría Técnica del Frente Social), Ministerio de Vivienda, Ministerio el Trabajo y Recursos Humanos, INFA, CONAMU.

[26] ECV –1999. INEC.

## Table 7: Risks, vulnerability and exclusion (2000)[1/]

| Source | Category | Number of inhabitants | Percentage |
|---|---|---|---|
| Structural barriers that impede access to health care | | |
| Geographical | Population dispersion | The Eastern provinces are those with lower population density, especially in the rural areas | 3.86% of total population |
| | El Niño phenomenon | Cantons of the coastal provinces | |
| | Earthquake/Volcanic eruption | Cantons of the Provinces of Tungurahua and Chimborazo | |
| Economic | Poverty, especially extreme poverty: incapacity to finance health care | 2,709,022 members of the population in extreme poverty (1 poverty quintile): urban = 1,464,777 rural = 1,244,.245 heads of household = 65,100 < 5 years = 299,250 6-17 years = 572,250 elderly = 117,600 | 21.5% extreme poverty and in the fifth income quintile |
| Cultural/Ethnic (self-exclusion) | Rural indigenous population | 687,453 inhabitants, of whom 92.7% has unmet basic needs | 13.9% |
| | Health care is delivered in a language | No health services are offered in bilingual form (Quichua/Spanish) | n.a. |
| Determined by the employment condition | Underemployment | Invisible = 371,807, of which 119,076 are women Visible = 142,714, of which 61,857 are women | Invisible = 9.9% Visible = 3.8% |
| | Informal employment | n.a. | - |
| | Unemployment | 540,811 unemployed people, of whom 303,304 are women | 14.4% |
| Social vulnerability | Extreme poverty Malnutrition Risk of child mortality Ethnic groups | National average = 32.7 The number of inhabitants in the parishes with the greatest vulnerability is 958,230 | The V quintile is the most deficient 7.6% of the total population |
| Integrated Index of risks, vulnerability and exclusion | Poverty Index of health supply Multivariate index of education Index of social vulnerability | National average = 54.9 The number of inhabitants in the parishes that are at greatest risk is 953,053 | The V quintile is the most deficient 7.5% of the total population |

*Note: n.a. = not available.*
*1/ Projected and adjusted population for the year 2000 INEC-2000: 12,592,480 inhabitants.*

*...continues from previous page*

| Source | Category | Number of inhabitants | Percentage |
|--------|----------|----------------------|------------|
| **Deficit of adequate infrastructure** | | | |
| Delivery of health services | Nonexistence or insufficiency of health facilities | Public and private establishments with hospitalization = .40 per 100,000 population and 15 beds per 10,000 population | |
| | Population without health insurance coverage | 9,192,510 | 77% |
| | Suppy of Services/Index of service supply, weighted index of the provision of human and physical resources without hospitalization | National average is 49.0 The most deficient quintile corresponds to 665,582 inhabitants | 20% in the mosst deficient quintile (IOS = 40-41) |
| Service delivery not directly related to health sector, but that affects health | Coverage of adequate water supply | 1,517,531 | 39.9% |
| | Inadequate waste disposal | 7,221,787 | 57.35% |
| | Index of basic sanitation | National average 54.2 The most deficient quintile amounts to 676 | The V quintile is the most deficient |
| **Problems related to the quality of the services provided** (that can, as with the ethnicity variable, result in self-exclusion) | | | |
| Problems associated with the technical quality of care | Errors in diagnosis/ treatment, utilization of inappropriate inputs | Not measured in study | n.d. |
| Problems related to the quality of treatment and to the place where the health care is carried out | Poor treatment of the public, establishments in poor physical conditions | Of the 3,006,927 people who requested health care, the average waiting period was 37.4 minutes; women waited 40 minutes. | |

*Note: n.d. = not determined.*

optimization of resources that are progressively aimed at resolving these negative characteristics, in the short, medium and long term, to promote the extension of social protection in health in Ecuador.

The complexity of the profile of risks, vulnerability, and exclusion in health poses the need to utilize the indicators constructed to establish intervention and targeting priorities. We consider the integrated index of social risk in health to

be the tool that best expresses this information. The information available in this report has been analyzed for the most part at the provincial level. However, its availability allows in some cases for construction down to the cantonal and parish levels, which would imply the possibility for informed decision-making about the assignment of resources for optimal and equitable health.

It is necessary to look further into issues such as:

- Patterns of risks, vulnerability, and exclusion in health in the indigenous and black populations.
- Study of the patterns of organizational context as an environmental variable in the implementation of the strategies.

## 3.2. GUATEMALA

### 3.2.1. GENERAL DATA

The Ministry of Public Health and Social Welfare and the Pan American Health Organization, with the financial collaboration of the Swedish Agency for International Development (SIDA), have developed a research process in Guatemala. It is part of a multi-country study to identify the gap between the population legally and actually covered by health services and the interventions that have been carried out, their results and the factors that contributed to their success or failure. The implementation of this study demanded the political and technical backing of staff members from the Ministry of Health and the methodological support of advisers at the Pan American Health Organization.

Among the seven countries that the Central American Isthmus includes, Guatemala has the most extensive population and the highest gross domestic product. It occupies the second place in terms of territory, fifth place in per capita real GDP and last place in the following indicators: literacy rate, life expectancy at birth and the percentage of non-poor population, in addition to being the country with the lowest human development index.

Guatemala has one of the lowest tax-related charges in Latin America. In 1998, tax revenues were equivalent to 9% over GDP. At the end of the nineties, the regressivity of the taxation system followed the trend of consolidation, and the most recent tax reforms (in 2001, the rate of the value-added tax was raised from 10% to 12%) helped to deepen that trend.

Guatemala tiene una de las cargas tributarias más bajas de Latinoamérica. En 1998 hubo ingresos tributarios equivalentes al 9% sobre el PIB. Al final de los años noventa, la regresividad del sistema tributario se había consolidado como tendencia, y las reformas tributarias más recientes (en 2001, la tasa del impuesto al valor agregado se elevó de 10% al 12%) contribuyen a profundizar dicha tendencia.

**Table 8: Selected indicators from the countries
of the Central American Isthmus**

| Indicator | Guatemala | El Salvador | Honduras | Nicaragua | Costa Rica | Panama | Belize |
|---|---|---|---|---|---|---|---|
| GNP (US$ billion, 1999) | 18.2 | 12.5 | 5.4 | 2.3 | 15.1 | 9.6 | 0.7 |
| Real per capita GDP PPP ($) | 3.674 | 4.344 | 2.340 | 2.279 | 8.860 | 5.875 | 4.959 |
| Adult literacy rate (%) | 68.1% | 78.3% | 74.0% | 68.2% | 95.5% | 91.7% | 93.1% |
| Life expectancy at birth (years) | 64.5 | 69.5 | 65.7 | 68.1 | 76.2 | 73.9 | 73.8 |
| Human development index | 0.626 | 0.701 | 0.634 | 0.635 | 0.821 | 0.784 | 0.776 |
| Population below the national poverty line | 57.9% | 48.3% | 53.0% | 50.3% | 11.0% | 37.3% | 35.0% |

*Source: UNDP (2001) Human Development Report. Oxford University Press. Tables 1 (pg. 145) and 3 (pg. 155).*

### 3.2.2. OVERVIEW OF EXCLUSION IN HEALTH

The study conducted showed that the country does not have a comprehensive and coherent system of social protection in health, which is defined as the guarantee that public authorities grant for an individual or group of individuals to meet their health demands, obtaining access to good quality services in a timely fashion. The weak political commitment to social investment becomes evident given the fact that with the range that it occupies in terms of per capita real GDP, Guatemala could be 16 positions higher in the human development index; Guatemala occupies the 108th place, with a per capita of US$3,674, while Belize occupies the 54[th] place, with US$ 4,959 per capita. The severe imbalance between the society's economic product and the social result of the economic effort has its origin in the serious inequalities that exist in the country: the 20% of the population with the highest incomes captures 61.4% of household income and the Gini index (a value between 0 and 1 where 1 means an equitable distribution) reaches a value of 0.55, reflecting one of the highest levels of inequality in the world.

Structural conditions have excluded major population groups from access to social protection systems. In the economic area of exclusion, the country's poverty situation reflects the limitations imposed on people's productive capacity, through access barriers to employment, credit, and land. Poverty affects 56.7% of the population, equivalent to six million people. Almost twenty-eight (27.6) percent of Guatemalans live in extreme poverty, that is, they have insufficient income to cover a market basket of food.

The situation of extreme poverty coincides with the groups of population that have the greatest proportion of rural, indigenous, non-schooled, underemployed, illiterate people, and of people without access to drinkable water, sewer-

**Table 9: Coverage of the health protection system**

| Institution | Coverage | Income group |
|---|---|---|
| Population covered by MSPAS | 60% | Medium and low |
| IGSS | 17% | Medium and low |
| Private services | 10% | High |
| Military health services | 0.21% | High and medium |
| *Total* | *81.21%* | |
| *Population not covered* | *12.79%* | |

*Note: a) The MSPAS coverage considers the 3.6 million inhabitants that have been incorporated since 1997 through the coverage expansion process (SIASS). These were added to the previous coverage of the total population. b) The IGSS coverage is based on the total population. c) The coverage by the private services is an estimate of the population that utilizes private services "in an exclusive manner."*

age and an electrical connection, among other indicators. It is for this reason that its utilization as a general measure of social exclusion in Guatemala is advisable, in order to then confirm its manifestations in health. This indicator has, in addition, the convenience of periodic updating and the availability of national maps, which permits for the targeting of interventions.

**Table 10: Poverty in Guatemala (1989 and 1998)**

| Indicators | 1989 | 1998[1] |
|---|---|---|
| Total population (millions) | 8.7 | 10.6 |
| Population below the national poverty line (%) | 63.1% | 56.7% |
| People below the poverty line (millions) | 5.5 | 6.0 |
| Average distance to the poverty line (% of the poverty line) | 50.4% | 45.5% |
| Resources necessary for eliminating poverty, as a percentage of families' incomes | 21.8 | 15.7 |
| Resources necessary for eliminating poverty, as a percentage of the income of non-poor families | 27.7 | 19.3 |
| Average income of the poor population (in quetzals per person, per month) | 193.0 | 212.2 |
| Total volume of resources necessary for putting an end to poverty each year (in billions of quetzals) | 12.9 | 12.7 |

*Note: Work income plus other income was utilized. The poverty line utilized was the one from 1999 (Q 389.30 per person, pero month).*
*[1] In 2000 the ENCOVI estimated 56.2 million and the Human Development Report 2001, 54.1 million.*
*Source: Guatemala. La fuerza incluyente del desarrollo humano. Informe de desarrollo humano 2000. United Nations System in Guatemala. Table 3.1 (pg. 43).*

The maps of extreme poverty, for example, coincide with those for the unemployed population. Formal employment amounts to 32% of the economically active population (EAP) (12% agricultural, 15% non-agricultural and 4% public sector). Exclusion from the labor market affects mainly women, and the indigenous and rural populations. The most affected regions are located in the high lands in the northern and western parts of the country.

In Guatemala, various forms of insurance and service delivery coexist: public services, social security, and private insurances, which are linked to a network of private service providers. The system is fragmented and segmented, since there are no functional liaisons or separation of functions between subsystems, and since each one of them counts on an assigned or beneficiary population that has access to differentiated services. The insurance function, carried out by both private insurance and social security, is poorly developed, and both schemes cover a small part of the population.

**Figure 6: Flow of resources within the health system**



The weakness of the public health protection system determines that financing by means of out-of-pocket expenditure represents nearly 50% of national health expenditures. The weight of private health expenditures in monthly household income is, on average, 6.4%. The annualized value of health expenditures rises to US$ 630 million, that is, 3.5% of the GDP.

Private out-of-pocket expenditure is not only inequitable, but also inefficient. Health spending presents a close association with income level. In general, the composition of household spending on health is distributed as 39% for insurance and 61% for out-of-pocket expenditures. The decile of households with the highest income accounts for 30% of health expenditures. This group of households contributes almost the entirety of its spending to private insurance, with 42% of spending on medical equipment, 39% of spending on hospital services and 38% on ambulatory expenditures. More than half of the out-of-pocket expendi-

ture goes toward the purchase of medical-pharmaceutical products. Due to re-laxed control of drug sales and to the lack of economic access to medical consul-tations, the purchase of drugs without a medical prescription is one of the most frequent responses of households facing a health problem. For these reasons, indigenous households spend a greater proportion on the purchase of drugs than non-indigenous ones.

**Graphic 1: Composition of out-of-pocket expenditures in health**



Public spending is not any more equitable. Fifty-three percent of social se-curity expenditures, for example, are carried out in the capital city of Guatemala, and 74% corresponds to non-indigenous families, reflecting the concentration of social protection along geographical and ethnic dimensions. The Ministry of Health, for its part, although theoretically oriented at poorer groups, provides services to all those who require care without requiring proof of affiliation or social neglect. For accessibility reasons, the greatest users of these services are low-income groups in urban areas.

### 3.2.3. Profile of the excluded population

In Guatemala, exclusion reduces the possibilities for human development in the economic, political-legal and social arenas. In the economic standpoint, the impediments of certain population groups in gaining access to income and re-sources stand out. In the legal-political plane, people's guarantees and rights are considered, including forms of social protection, citizen participation, and legal protection. In the social sphere, interest falls upon the degree to which the social identities and characteristics of human groups are recognized and their possibil-ity of utilizing social support networks to confront the effects of exclusion.

The previous data converge toward the exclusion factors that affect the rural and indigenous populations of Guatemala as well as women, primarily if they are heads of household. The data on poverty distribution confirm this. Poverty affects 20% of the non-indigenous inhabitants of urban areas, while 75% of the indigenous inhabitants of rural areas suffer from it. With regard to women who are household heads, poverty affects them more due to their condition as rural or indigenous than due to the fact that they are women. In fact, the proportion of indigent households is slightly smaller if they are governed by women than if they are governed by men. Although women suffer labor and wage discrimination, previous studies have shown that when they are heads of household, they efficiently utilize the income to meet housing, water, education and health needs.

**Table 11: Profiles of work force
by condition of labor-related exclusion (1998)**

| Variables | Not excluded | Excluded |
|---|---|---|
| Gender | | |
| Male | 28.5% | 61.5% |
| Female | 33.2% | 66.8% |
| Ethnic group | | |
| Indigenous | 27.1% | 72.9% |
| Non-indigenous | 37.5% | 62.5% |
| Area | | |
| Rural | 27.8% | 72.2% |
| Urban | 38.7% | 61.3% |
| Region | | |
| Metropolitan | 42.6% | 57.4% |
| North | 24.4% | 75.6% |
| Northeast | 36.5% | 63.5% |
| Sutheast | 29.6% | 70.4% |
| Central | 27.4% | 72.6% |
| Southwest | 28.6% | 71.4% |
| Northwest | 26.6% | 73.4% |
| Peten | 35.3% | 64.7% |

*Source: Guatemala. <u>La fuerza incluyente del desarrollo humano. Informe de Desarrollo Humano, 2000.</u> United Nations System in Guatemala. Table 3.7 (pg. 58).*

**Table 12: Selected indicators of the relationship
between exclusion and poverty**

| Indicators | Total | Extreme poverty | Non-extreme poverty | Non-poor |
|---|---|---|---|---|
| Rural population | 60.6% | 89.5% | 71.7% | 34.7% |
| Indigenous population | 49.0% | 71.3% | 57.4% | 29.1% |
| Without schooling | 41.0% | 64.2% | 48.5% | 21.2% |
| Diversified (work-related formation) | 6.4% | 0.4% | 1.6% | 13.5% |
| Underemployment | 48.6% | 61.9% | 49.1% | 40.0% |
| Full employment | 39.4% | 27.4% | 38.4% | 47.5% |
| Farmers | 43.6% | 68.6% | 48.4% | 24.6% |
| Households with 1 to 5 members | 40.1% | 19.7% | 32.4% | 58.3% |
| Illiterate | 0.0% | 54.3% | 39.4% | 17.5% |
| Without water connection | 38.8% | 54.7% | 46.0% | 23.9% |
| Without sewerage connection | 71.2% | 96.8% | 81.7% | 47.7% |
| Without electricity connection | 38.8% | 64.0% | 45.6% | 18.2% |
| School absence, 7-14 years | 26.0% | 46.8% | 30.8% | 9.7% |

## 3.3. HONDURAS

### 3.3.1. GENERAL DATA

Honduras is constituted as a democratic and independent republic. The territory is politically and administratively divided into departments (18) and then into municipalities (298). Each department is presided over by a Governor, named by the President of the Republic. Local authority is exercised by a Municipal Association presided over by the Mayor, who is elected by popular vote.

The civil service is centralized, with a gradual transfer of functions to the municipal governments. The bodies that collaborate with the President in the administration of the different sectors are the Secretaries of State (15), some of whom are territorially decentralized into regional offices. The State's financial resources are administered by the Secretary of Finance, who supervises the collection through its regional offices (9). Development planning and management is coordinated by the Minister of the Presidency, who is advised by the Economic and Social Cabinets, made up of the Secretaries of State in the different branches. The guidelines of the National Governmental Plan frame Honduras's health policy. Each one of the municipalities, as a local government agency, enjoys the autonomy to formulate and manage its own development programs.

In general, the population's needs are met through public services provided by the central and/or municipal government, autonomous State enterprises, and private entities, either for-profit or non-profit.

Between 1997 and 2000, the GDP experienced an average annual growth rate of 2%. In 2001, the Honduran economy registered a moderate growth in GDP (2.6%). The agricultural, industrial and service sectors have the greatest incidence in this growth. Among the leading causes of the low growth rate of Honduran economic activity are the climatic conditions that affected the agricultural sector and reduced investment in construction. The low growth in GDP affects the per capita income level of the population, which barely reaches US $916.16. The low per capita income is primarily due to the low average productivity of the work force.

During the 1997-2001 period, total public spending, social public spending, and public spending in health showed a constant increase as a percentage of GDP. In turn, social public spending as a percentage of GDP of the central Government's spending increased from 31.1% in 1997 to 44.2% in 2001. Inflation reached an average of 12.2% during the period analyzed, affecting the purchasing power of individuals and institutions.

**Table 13: Iconomic and social indicators (1997-2001)**

| Indicators | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| Per-capita GNP (US$) | 819.98 | 887.50 | 870.35 | 878.17 | 916.16 |
| Annual inflation (%) | 12.8% | 15.7% | 10.9% | 11.1% | 9.6% |
| Total Public Spending / GNP (%) | 22.1% | 23.4% | 25.9% | 25.9% | 26.9% |
| Social Public Sepending / GNP (%) | 8.0% | 8.3% | 10.1% | 10.0% | 11.0% |
| Public Spending in Health / GNP (%) | 2.3% | 2.3% | 2.8% | 3.0% | 3.1% |
| Social Spending / Central Government Expenditure (%) | 31.1% | 29.8% | 32.9% | 37.2% | 40.2% |
| Net Fiscal Deficit / GDP | 2.5% | 1.1% | 3.6% | 5.0% | 6.0% |
| Annual per-capita GDP (Lps. corrientes) | 10,272 | 11,420 | 12,101 | 13,358 | 14,548 |
| Exchange rate in relation to the US$ | 13.1 | 13.5 | 14.2 | 14.9 | 15.5 |
| Annual per-capita GDP (%) | 784.1 | 845.9 | 852.2 | 896.5 | 938.6 |
| Health Spending / GDP (%) | 2.0% | 2.0% | 2.5% | 2.2% | 3.0% |
| Households below the poverty line | 65.8% | 63.1% | 65.9% | n.a. | 64.5% |

*Nota: n.a. = not available.*
*Source: Banco Central de Honduras. "Honduras en Cifras." 1997/1999, 1999/2001. Secretaría de la Presidencia - Honduras. "Estudio sobre el Gasto en Servicios Sociales Básicos." 1999. Secretaría de Finanzas - Honduras. "Memoria 2001." 2001. INE: Encuesta de Hogares. Mayo 2002.*

The central administration has registered growing deficits in the 1997-2001 period, which went from 2.5% in 1997 to 6.0% of GDP in 2001. The increase in the latter was primarily due to an increase in spending on personal services, payment of interest on debt, and transfers to retirees and people with pension plans, among others. Income increased by 14.8% over the year 2000.

In terms of the demographic context, the total Honduran population for the year 2001 is estimated at 6,535,344 inhabitants,[29] of which 49.4% are men and 50.6% women. The annual population growth rate is 2.4%. The crude birth rate and the total fertility rate show a clear downward trend, estimated at 30.3[30] births per 1,000 population and 4.4[31] children per woman, respectively, for the year 2001.

The majority of the population lives in the rural area (56%), distributed in 398 municipalities, 3,731 villages and 30,591 hamlets in remote mountainous areas. The population is concentrated in the departments of Cortes (18.4%) and Francisco Morazán (18.1%).[32] This concentration is due mainly to migration toward the two principal cities of the country, Tegucigalpa and San Pedro Sula. The groups that tend to migrate are those between 15 and 44 years of age.

Life expectancy at birth is rising, reaching 70.7 years in 2002, although it is 5.2 years higher for women than for men. The Honduran population is characterized by being eminently young (38.5% under 15 years of age),[33] which together with the increase in the population over 65 years of age, represents a strong pressure on basic health services.

Looking at the Honduran health context, the crude death rates show a downward trend. Crude mortality went from 6.4 deaths per 1,000 population in 1993 to 4.97 in 2002. Maternal mortality declined from 182 deaths per 100,000 live births in 1993 to 108 in 1997[34] and infant mortality declined from 50 deaths per 1,000 live births in 1993 to 42 in 1996. Mortality in children under five declined from 65 deaths per 1,000 live births in 1990 to 45 in 1996.[35]

In turn, the leading causes of maternal mortality are hemorrhages, which contributed 47.1%, hypertensive disorders, with 19.4%, and infections, with 15.2%. In infant mortality, acute respiratory infections represent 23.5% of deaths, followed by birth-related traumas (16.5%), prematurity and low birthweight (16.1%), sepsis (9.1%) and birth defects (8.7%).

In children under five, the leading causes of death are acute respiratory infections (23%), diarrheal diseases (21%), and deaths related to delivery and perinatal disorders (33%).

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[29] Censo de Población y Vivienda. Honduras, 2002.

[30] SECPLAN. Proyecciones de Población sobre la base del Censo de 1988.

[31] Encuesta de Epidemiología y Salud familiar (ENESF/2001). Honduras.

[32] INE. Censo de Población y Vivienda 2002.

[33] Censo de Población y Vivienda. Honduras, 2002.

[34] Secretaría de Salud. Investigación de Mortalidad en Mujeres en Edad Reproductiva. Honduras, 1990 and 1997.

[35] Encuesta de Epidemiología y Salud familiar (ENESF 1991/92 y 1997). Honduras.

### 3.3.2. Overview of exclusion in health and profile of the excluded population

In Honduras, the health sector has been developing policies and strategies aimed at improving the supply of services (decentralization, improvement of management, health campaigns), increasing demand (basic health packages, public insurance, free services for the poor and indigent) and strengthening the regulatory framework (definition of the legal framework for the regulation and strengthening of the social security system's steering role). Despite these efforts, a significant proportion of the population is excluded from social protection when facing the risks of becoming ill or the results of being sick.

The present study is intended to distinguish the levels of exclusion in the various groups of the Honduran population. A description of the procedure utilized for its construction and the general results that they show is presented for each indicator of social exclusion in health. In most cases, these results are presented disaggregated by rural and urban area and by department of residence of the population.

In order to analyze the exclusion in Honduras, its origin along with three dimensions was taken into account: *access, financing*, and *dignity of care*.

### *Access*

These problems can be of three types: lack of access to the benefits associated with the supply of public goods (such as drinkable water and immunizations); inaccessibility to individual health care services in general or to some of them in particular; and finally, lack of access to a system of protection against the economic and social risks of becoming ill. In all of these cases, exclusion in health tends to be related to some or all of the following causes:

*Deficit in adequate infrastructure*, either for individual or collective health care provision (nonexistence of health facilities, lack of functional coverage of public health programs).

*Existence of barriers that prevent access to health care, in conditions in which adequate infrastructure exists.* These barriers can be geographical, economic and cultural and are related to the location of establishments and basic resources in health, the existence of roads and means of transportation, levels of household poverty, and cultural/ethnic factors. They can be determined by employment conditions, the structure of the systems, or the lack of models of care with an intercultural approach.

*Problems related to the quality of the services provided* that are related to errors in diagnosis/treatment, the utilization of inappropriate inputs, inadequate treatment of the public, and establishments in poor physical conditions.

a) Exclusion in health in Honduras derived from a deficit in adequate infrastructure presents the following characteristics:

- According to the constitution, the inhabitants of Honduras are guaranteed a basic level of health protection. However, 30.1%[36] of the Honduran population does not receive health care, which represents 1,967,138 people excluded from social protection in health. The majority are rural inhabitants.

- **Almost half (45.6%)** of deliveries in the country are "non-institutional," affecting 2,980,117 people, of whom 2,413,660 are inhabitants of rural areas. The population that lives in regions 5, 2 and 1, which includes the departments of Ocotepeque, Copán, Lempira, Comayagua, Intibuca, La Paz, El Paraíso, and Francisco Morazán, is the most excluded.

- **Around twenty percent (20.5%)** of pregnant women in Honduras do not go for institutional prenatal check-ups, affecting 1,339,745 people, of whom 65.2% are rural inhabitants. The most excluded population lives in regions 6 and 7, which comprise the departments of Atlántida, Colón, and Olancho.

- **Nearly seventeen percent (17.4%)** of pregnant women do not have the standard number of prenatal check-ups, excluding 1,137,150 inhabitants from this benefit. The majority are rural inhabitants.

- **Over forty percent (43.6%)** of pregnant women are not captured by the health system during the first trimester of their pregnancy, excluding 2,849,409 inhabitants, of whom 1,817,086 are residents of rural areas.

- Approximately 165,156 (16.3%) boys and girls under five years of age abandon the vaccination program, excluding a total of 1,065,291 inhabitants from this benefit. The greatest proportion of excluded population is rural inhabitants in the departments of Cortes, Santa Barbara, Yoro, El Paraíso and Francisco Morazán.

b) Peculiarities of exclusion in health in Honduras derived from barriers that prevent access to health care, in the conditions in which adequate infrastructure exists, are:

- The index of physicians per every thousand population is 0.84. In addition to the deficit of this type of professional, the great majority are concentrated in Francisco Morazán (2.2) and in Cortes (1.3), specifically in Tegucigalpa and San Pedro Sula. In the rest of the country's departments, the index does not approach the national average.

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[36] Calculated using ambulatory care for the first time during the year.

**Table 14: Indicators of exclusion in health
related to a deficit in adequate infrastructure**

| Indicators | Value | Excluded people |
|---|---|---|
| Population that does not receive health care | 30.1% | 1,967,138 |
| Non-institutional deliveries | 45.6% | 2,980,117 |
| Pregnant women that do not go for institutional prenatal check-ups | 20.5% | 1,339,745 |
| Pregnant women that do not have the standard number of prenatal check-ups | 17.4% | 1,137,150 |
| Pregnant women that are not captured during the first trimester of pregnancy | 43.6% | 2,849,409 |
| Boys and girls under 5 years of age that abandon the inmunization program | 16.3% | 1,065,291 |

- In Honduras, there are 0.67 beds per 1,000 population. The distribution of beds by department shows a strong concentration in Francisco Morazán (1.85 per 1,000 population), where five national social security hospitals and an IHSS specialty hospital are located. Copán is the only place that this indicator is closest to the national average (0.66).

- The number of hospital discharges per 1,000 population is 37.9. The information on hospital discharges per 1,000 population considers the patient's department of residence and not the hospital location, which means that this shows the greatest or least capacity of the population to access a hospitalization service. In this regard, the residents of the Bahía Islands show the highest index (61) followed by Francisco Morazán (55), Atlántida (46), Ocotepeque (46) and Copán (39). The rest of the departments are below the national average. The department of Lempira presents the lowest level of hospital discharges (20.9 per 1,000 population), highlighting the exclusion of the population to this type of service.

  Despite the fact that in the department of Copán there is a higher rate of beds per inhabitant than in Atlántida, the number of discharges per 1,000 population is lower than in the latter. This is in direct relation to the geographical and economic accessibility of beds.

- Honduras has a high maternal mortality rate, which stands at 108 deaths per one hundred thousand live births. The Department of Gracias a Dios, where a great quantity of the *misquito* population lives, presents the highest rate. In addition, there are six departments that have rates above the national average. In all of these departments, there are ethnic population groups in extreme poverty. It is important to mention that 74% of the causes of maternal mortality are preventable (hemorrhages, infections, hypertensive disorders and abortions).

- Honduras presents high rates of perinatal mortality (29 deaths per 1,000 deliveries), and infant and under-5 child mortality (34 and 45 deaths per 1,000 live births, respectively).

- Perinatal mortality is higher in Health Region Number 1 (72% higher than the national average), which includes the departments of El Paraíso and Francisco Morazán. With regard to infant and under-5 child mortality, the highest rates correspond to regions 7, 5 and 1 that comprise the departments of Olancho, Copán, Ocotepeque, Lempira, El Paraíso, and Francisco Morazán. The rural population is the most excluded in light of the risks of disease and death.

- Seventy-eight percent of the causes of infant mortality are preventable (acute diarrheal disease, perinatal disorders and acute respiratory infections). In the case of under-5 child mortality, 44% of deaths are produced by respiratory infections and acute diarrheal diseases, emphasizing the high level of exclusion in this population.

- Twenty-six percent of the dwellings do not have water supplied through a faucet inside the housing structure or on the property, excluding 1,604,222 inhabitants. The majority of the excluded population is rural inhabitants, where 39.5% of the dwellings, which includes 1,321,922 inhabitants, do not have this type of service.

- Ten percent of the dwellings do not have public, collective or private (either within the housing structure or on the property) water service, representing 617,010 inhabitants excluded at the national level. The greatest percentage of excluded people is rural inhabitants (595,702 people).

- **Over one million (1,110,615)** Honduran inhabitants are excluded from any type of adequate waste disposal service, affecting 903,592 rural inhabitants and 207,023 urban residents.

- **Less than seventeen percent (16.9%)** of the Honduran population has some type of health insurance, including IHSS (13.1%). **Over eighty percent (83.1%)** of the population is not covered by any type of insurance scheme and is thus cared for in theory by public institutions and by non-profit private institutions. This percentage represents 5,430,870 inhabitants without health insurance.

- The population insured by IHSS and the private sector is concentrated in the Metropolitan region and region 3, mainly in the cities of Tegucigalpa and San Pedro Sula. Although there is no discrimination by sex in enrollment, cost of plans, coverage of plans, and co-payments or other payments, in the case of prenatal or delivery care and care for chronic diseases, the majority of plans impose conditions on the use of insurance after a certain effect period.

- Between 1997 and 2001, the IHSS member population grew by an average of 2.5% each year. During the same time period, the economically active population had an average growth of 3.2% annually, which points out the low expansion capacity of IHSS.

- To estimate the proportion of workers in the informal sector of the economy, the study considered the variables "principal occupation" and "category of occupation," including workers with different

occupations from "managers" or "professionals" to the category of "domestic salaried workers, independent workers" and "unremunerated family members."

- In accordance with this categorization, of a total of 2,334,596 engaged workers (10 years of age or older), 55.9% work in the informal sector. **Nine out of ten (89.9%)** "domestic" workers (68,328 people) and 46.3% of the independent workers (441,026 people) receive income that is less than minimum wage. In total, there are 509,354 workers who can pay the cost of health services through the IHSS system or any other system with difficulty.

- **Nearly two-thirds (64.5%)** of Honduran households live below the poverty level. Higher levels of poverty are present in the rural area, small cities and in the Central District. The poverty in Honduras reveals its severity in the magnitude of households in extreme poverty (47.45%), which means that 3,060,105 people live in extreme poverty, of which 65.7% are rural inhabitants.

**Table 15: Indicators of exclusion in health related to access barriers and indicators in health**

| Indicators | Value | Excluded people |
|---|---|---|
| Number of doctors per every 1,000 population | 0.84 | |
| Number of beds per every 1,000 population | 0.64 | |
| Number of hospital discharges per every 1,000 population | 37.9 | |
| Maternal mortality rate (per 100,000 live births) | 108 | |
| Perinatal mortality rate (per 1,000 deliveries) | 29 | |
| Infant mortality rate (per 1,000 live births) | 34 | |
| Under 5 child mortality rate (per 1,000 live births) | 45 | |
| Dwellings that do not have water supplied through a faucet inside the housing structure or on the property | 26% | 1,604,222 |
| Dwellings that do not have public, communal or private water service | 10% | 617,010 |
| Dwellings that do not have the adequate waste disposal service | 18% | 1,110,615 |
| Population without health insurance | 83.1% | 5,430,870 |
| Employed workers (10 or more years old) that work in the informal sector | 55.9% | 1,305,941 |
| Households below the poverty level | 64.5% | 4,137,551 |
| Households in a state of extreme poverty | 47.4% | 3,060,105 |
| Population that subsists with a per-capita income of less than a dollar per day | 41.1% | 2,606,603 |
| Illiteracy rate for the population of ethnic origin | 38.1 | 249,073 |
| Average years of schooling of the population of ethnic origin | 2.2 | |

- **Over forty percent (41.1%)** of the Honduran population (2,606,603 people) subsists with a per capita income of less than a dollar per day. The abovementioned points out the dependency on public and non-profit private services in order to meet their health needs and

confirms the role of the State as a service provider. Of this number, 82.7% (2,157,064) are rural inhabitants and 21.1% (549,874) are urban residents.

- The information available on the situation of the ethnic population highlights that a vast majority of indigenous and afro descendant households live below the poverty line and face serious health problems. Life expectancy at birth is only 36 years for men and 42 years for women. Chronic malnutrition affects 80% of those under seven years of age. Approximately 60% of this population does not have access to drinkable water and 91% lacks basic health facilities.

c) The characterization of exclusion in health derived from problems related to the quality of services offered has to do with diagnosis/ treatment errors, utilization of inappropriate inputs, poor treatment of the public, and establishments in poor conditions.

- Up-to-date information is not available.

## FINANCING

In addition to the ethical conditions that sustain the solidarity of health financing, the need for collective financing is based on the proof that the cost of services constitutes an obstacle to access. This represents a high opportunity cost to maintain or develop the well-being of the family, and a cost that is highly regressive.

- In 2001, 11% of the total spending of the Central Government corresponded to the health sector, a percentage equivalent to 3.1% of GDP.

- In 1998, households contributed 41.1% to total health expenditures. The large household contribution to health expenditures is confirmed by observing that the per capita expenditure of Honduran households is 17.2% higher than the per capita public expenditure.

- Household expenditure is directed toward outpatient curative care (66.5%) and hospital curative care (29.8%), pointing out difficulties in the population's access to this type of care. Households direct health expenditures toward the purchase of private services (49.78%) and drugs (40.99% of expenditures at pharmacies). They also contribute "recovery quotas" in public hospitals.

- The percentage of average monthly spending on individual consumption in health with respect to the income decile of the household head is 3.4% at the national level, 4.2% in urban areas and 1.8% in rural areas. Households in urban areas located in decile 1 present a higher level (8%) than those in decile 10 (6%), which given their income level, represents a sacrifice at the expense of other needs.

**Table 16: Indicators of exclusion
related to financing**

| Indicators | Value |
|---|---|
| Total health expenditure | 5.63% |
| Percentage of contribution of households to total health expenditures | 41.1% |
| Total per-capita expenditure in health (US$) | 49.77 |
| Public per-capita expenditure in health (US$) | 22.84 |
| Private per-capita expenditure in health (US$) | 26.77 |
| Public spending in health / GNP | 3.1% |
| Spending on health / Central government budget | 10.6% |

**Table 17: Degree of satisfaction of the users
and emergency services in the Hospital Santa Teresa
(Comayagua, Honduras, 1997)**

| Degree of satisfaction | Number of people | Percentage |
|---|---|---|
| Very good | 108 | 21.6% |
| Good | 318 | 63.8% |
| Standard | 72 | 14.6% |
| Total | 498 | 100.0% |

*Source: "SS: Estudio sobre calidad de atención." Comayagua, Honduras, 1997.*

## DIGNITY OF CARE

This refers to aspects that are not related to use or financing, and that are judged as fundamental for the satisfaction of the aspirations of society's members. It includes respect for traditions and culture, particularly of social groups with ethnic characteristics different from those of the majority of the population.

- Up-to-date information is not available in this regard at the country level. Below are the results of a study conducted in 1997 on the users of outpatient and emergency services at the "Santa Teresa" Regional Hospital located in Comayagua.

**Over eighty percent (85.4%)** of the people interviewed expressed a level of very good and good satisfaction concerning outpatient and emergency services. However, the same study emphasizes that if this result had been related to the average waiting time and the delay in the delivery of medications, the results would have been different.

**Slightly over forty percent (41.4%)** of the patients waited three hours or more in order to be seen by a physician. The measurement of this variable considered the time elapsed between the moment that the patient arrived at the service location itself and his/her exit from the physician's office, which means

that the waiting period for registration, receipt of medications, etc, was not taken into account. The long waiting period reflects an organizational problem in service delivery.

**Table 18: Average waiting period for the users
of outpatient and emergency services in
the Hospital Santa Teresa (Comayagua, Honduras, 1997)**

| Waiting period | People | Percentage |
|---|---|---|
| From 0 to 1 hour | 94 | 18.8% |
| From 2 to 3 hours | 198 | 39.8% |
| From 3 to 4 hours | 91 | 18.2% |
| More than 4 hours | 115 | 23.2% |
| Total | 498 | 100.0% |

*Source: "SS: Estudio sobre calidad de atención." Comayagua, Honduras, 1997.*

**Table 19: Profile and map of the excluded population**

| Excluded in health | Location |
|---|---|
| The poor | Rural areas, small cities and the central district |
| Rural inhabitants | Ocotepeque, Copán, Lempira, Comayagua, Intibuca, La Paz, El Paraíso, Santa Bárbara, Francisco Morazán, Atlántida, Colón and Olancho |
| Workers in the informal sector | Rural areas, small cities and the central district |
| Ethnic population | Olancho, Colón, Gracias a Dios, Copán, Ocotepeque, Yoro, Francisco Morazan, Santa Bárbara, Cortés, Atlántida, Lempira, Intibuca, La Paz, Valle, El Paraíso y Comayagua |

## 3.4. PERU

### 3.4.1. GENERAL DATA

With about 27 million inhabitants at the beginning of 2003, 52% of the population is settled in the capital city and the rest of the coastal valleys, 35% in the inter-Andean valleys and the high areas and a much smaller proportion, 13%, on riverbanks in the Amazon region. Overall, 72% of the population resides in urban[37] areas and the remaining 28% in rural areas.

Peru is a low middle-income country with marked distributive heterogeneity. The annual per capita Gross Domestic Product is US $2,000 and, while the 20% of the population with the highest incomes accounts for 51% of national revenue,

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[37] Areas with over 2,000 inhabitants.

the 40% of the population with the lowest incomes has only 13%. Consistent with this, around 54% of the national population lives in poverty and 15% in extreme poverty. [38]

Life expectancy in 2001 was 69 years, with a provincial dispersion between 72.4 and 50.8 years. The maternal mortality rate of 185 deaths per 100,000 live births is one of the highest in Latin America and severe malnutrition in children under five stands at 27% (year 2000). [39]

According to the National Health Accounts Study, [40] in the year 2000 Peru designated around 4.8% of its GDP, equivalent to US $99 per capita, to health, which falls under the Latin American average of about 8% of GDP[41] and is insufficient to fulfill the expectations of expanded public coverage.[42] Furthermore, the composition of health financing, just as or even more important than the total amount is concentrated on three agents: households (39%), employers (35%), and the Government (23%).

Taking into account the high levels of poverty in the Peruvian population, the significant role of household financing, composed almost in its entirety by out-of-pocket expenditure, predisposes the inequity and exclusion of the poorest, as well as the fragmentation of financing (see figure 8).

The Health Services System is segmented and fragmented into two participating sub-sectors: the public and the private. The first is formed by the Ministry of Health (MINSA), the Health Social Security system (EsSalud), and the Health Systems of the Armed Forces and the National Police. From a functional standpoint, the Ministry of Health performs the steering role within the sector and is in charge of issuing policy guidelines as well as the standards and technical procedures that regulate the sector's activity. The sector's institutions organize their services by levels of care; however, referral and cross-referral mechanisms are still deficient. Currently, a new model of comprehensive health care is being designed.

Regarding health insurance, there are four types of health insurance affiliation: social security (EsSalud), the health systems of the Armed Forces and National Police, private insurance and a public insurance scheme primarily aimed to provide coverage to mother & child population (Seguro Integral de Salud, SIS).

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[38] Encuesta Nacional de Niveles de Vida 2000. Lima, 2001.

[39] Encuesta Nacional de Demografía y Salud (ENDES 2000).

[40] PAHO-MINSA. Perú: Cuentas Nacionales en Salud 1995-2000. Lima, 2003.

[41] PAHO. "Gasto Nacional de Salud en las Américas: Situación Actual y Tendencias". Working Document. Políticas Públicas y de Salud, Division of Health and Human Development. Pan American Health Organization. Washington, February 2002.

[42] PAHO-MINSA. Proyecciones de Financiamiento de la Atención de Salud 2002-2006. Lima, 2002.

**Figure 8: Health care sources and providers (Peru, 2000)**



*\* Income obtained from the sale of waste and obsolete equipment from the Ministry of Health and EsSalud.*
*Source: PAHO-MINSA. "Proyecciones de Financiamiento de la Atención de Salud 2002-2006."Lima, 2002.*

The main affiliates of EsSalud, which is financed with payroll contributions, are workers (and their direct family members) from the formal sector of the economy. The health systems of the Armed Forces and National Police provide insurance to their workers and direct family members, using financing from public treasury funds. Private health insurance tends to be contracted primarily by families and to a lesser extent directly by employers. SIS, in the process of development during recent years as a public insurance, should cover the poor population in the future.

The patterns of health service utilization are not the best. In the year 2000, of 100% of people who declared symptoms of illness/accident and considered consultation as necessary, 31% did not manage to gain access to health services, primarily due to lack of economic resources, and only 8% went to non-institutional services such as a pharmacy consultation or a visit to a healer. In total, only 69% had access to a consultation provided by a health professional.[43]

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[43] Encuesta Nacional de Niveles de Vida (ENNIV 2000).

In contrast, the new morbidity and mortality profile in the country presents more complex patterns, which constitutes an important challenge for public health and for the agencies responsible for the management of the national health system. In order to confront this challenge, it is necessary to demonstrate results in the reduction of exclusion in health and in the development of a greater supply of health services, through a more coordinated system that offers adequate quality and comprehensive health services.

To confront this challenge, the stated health care policies in Peru are presented as quite ambitious: the Thirteenth State National Policy Agreement establishes Universal Access to Health Services and Social Security; and policies that address exclusion factors in health[44] are also included in the health policy guidelines. In accordance with this, at the middle of 2003, the health sector has three important sequential advances:

a) The creation of the public insurance scheme (SIS) (November 2001), whose goal is to provide health insurance for the poor, through comprehensive health care plans.

b) The promulgation of the Law of the Ministry of Health (January 2002) that defines the area, competition, purpose, and organization of the ministry, of its decentralized public bodies, and of its deconcentrated organizations. This law specifies the Sectoral Steering Role of the Ministry of Health in the National Health System.

c) The promulgation and implementation of the National Coordinated and Decentralized Health System (August 2002), whose purpose is to coordinate the implementation process for the national health policy and to promote its concerted and decentralized implementation to achieve comprehensive health care and advance toward universal social security in health. The health sector today plays an important role in the development of the national decentralization process.

### 3.4.2. OVERVIEW OF EXCLUSION IN HEALTH

MEASUREMENT METHODOLOGY

In this document, the measurement of the population excluded from social protection was carried out by indirect approximations considering: a) the various sources or forms of exclusion and b) the interactions among the different actors involved, users and institutions, who play a decisive role in the generation of exclusion in the framework of a fragmented and segmented health system with weak steering role capacities, as is the case in Peru.

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[44] Ministerio de Salud de Perú. "Lineamientos de Política Sectorial para el período 2002-2012 y Principios Fundamentales para el Plan Estratégico Sectorial del Quinquenio Agosto 2001 - Julio 2006." Lima, 2002.

The measurement was carried out at two levels. The first was partial measurement, which quantified the excluded population on the basis of the devised dimensions and sources of exclusion, but independently. To this end, a set of referential indicators that come close to a specific definition of the excluded population, which is detailed further on, was selected for each source of exclusion.

The principal limitation of the uni-dimensional analysis is that it does not consider the interactions among the different sources of exclusion, which can lead to errors in the classification and measurement of the degree of exclusion in the population. In order to correct the indicated measurement biases, a methodology is proposed for the comprehensive measurement of the excluded population based on the construction of a *composite index of exclusion.* This index is calculated using the principal components and Optimal Scaling techniques, which make it possible to estimate weights for each one of the sources and indicators of exclusion and calculate an aggregate indicator that measures the *exclusion risk* for each individual.

The stratification was carried out utilizing the clusters method, which makes it possible to segment relatively uniform populations by risks. The method determines the thresholds that permit the classification of the population into various risk categories, which are obtained through the minimization of the Euclidian distance from the composite index within the 4 devised risk groups: severe, high, moderate, and low.

### SELECTED INDICATORS AND INFORMATION SOURCES

For the analysis of the exclusion phenomenon, 19 referential indicators have been selected that make operational each one of the definitions of the excluded population: 8 barrier to access variables, 3 structural variables, and 8 process variables. Their description is detailed in table 20, on the following page.

The following information sources of information have been utilized:

- The National Living Standards Survey (ENNIV) for the year 2000.
- The National Household Survey (ENAHO) - IV quarter of 2001.
- The Demographic and Family Health Survey (ENDES IV) 2000.
- The Registries of the General Statistical Office of the Ministry of Health.

**Table 20: Analytical indicators by dimensions
and sources of exclusion from social protection**

| Dimension of exclusion | Type of exclusion | Source of exclusion | Indicator | Definition |
|---|---|---|---|---|
| External to the health system | Access barriers | Economic | - Population in a state of poverty<br>- Uninsured population<br>- Uninsured poor population<br>- Uninsured poor population that does not utilize health services for economic reasons | - Both the population in an extreme poverty situation and in a state of non-extreme poverty are being considered<br>- Poeple who do not have contributory or facultative insurance<br>- Income shortfall and high rates are considered to be economic reasons |
| | | Geographical | - People who reside in places that are far from a health facility<br>- Population residing in rural areas | - Corresponds to the urban population whose time to reach a health facility is longer than 30 minutes. For the rural population, the time required surpasses 1 hour |
| | | Labor-related | - Non-salaried and informal personnel | - Includes the independent population and the dependent population without labor contracts |
| | | Ethnic | - Population belonging to ethnic minority groups | - Population whose mother tongue does not correspond to Spanish or to a foreign tongue |
| | | Gender | - Conditional rate of health services utilization<br>- Poverty, health insurance, age, and ethnic group<br>- User satisfaction<br>- Family expenditure on health | - Each indicator is examined by differentiating the information and the analysis according to gender |
| | | Supply of public services | - People with lack of water service<br>- People with lack of sewerage service<br>- People with lack of electricity service<br>- People with lack of the three basic services | - Are those people who do not have service connected to the public network<br>- Are those people who do not have electric power<br>- Corresponds to the population that does not have any of the basic services (light, water and sewerage). |

INDEX OF EXCLUSION

1. The problem of exclusion from social protection in health in Peru has a basis that is strongly external to the health system.

Factors external to the health system explain 54% of the exclusion risk. Factors of poverty (13%)[45] and the rural condition of inhabitants (16%), followed closely by the lack of public services for sanitation and electricity in the home (13%), and to a lesser extent by ethnic discrimination (7%), explain the external barriers.

**Table 21: Decomposition of the index of exclusion**

| Variable | Relative weight in the index of exclusion |
|---|---|
| Poverty | 13% |
| Health insurance | 3% |
| Geographic area | 16% |
| EAP | 2% |
| Ethnic descrimination | 7% |
| Gender | n.a. |
| Water supply | 5% |
| Sanitation services | 3% |
| Electricity | 5% |
| Availability of III level public establishments | 6% |
| Doctors per 1,000 inhabitants | 7% |
| Beds per 1,000 inhabitants | 5% |
| Non-institutional births | 15% |
| Pregnancy check-ups below the standard | 13% |
| Abandonment of immunizations | n.v. |
| Quality | n.v. |
| *Total* | *100%* |
| **Summary:** | |
| *Entry barriers* | *54%* |
| Economic | 16% |
| Geographical | 16% |
| Work-related | 2% |
| Ethics | 7% |
| Supply of public services | 14% |
| *Internal to health system* | *46%* |
| Structure | 19% |
| Supply of services | 27% |

*Nota: n.a. = not available; n.v. = not valid.*

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[45] The low weight of the health insurance variable could be reflecting the high correlation between this variable and the individual poverty condition, which could mean that part of this effect may be absorbed by the variable for poverty situation.

Factors linked to the internal dimension of the health system account for 46%, particularly process-related variables such as the supply of essential health services, and non-institutional childbirths and below-standard pregnancy check-ups, which explain 16% and 12% of the value of the index of exclusion, respectively. [46]

2. Ten percent of the population (2.59 million) is totally excluded from the health system since they register critical levels of risks.[47]

**Table 22: Distribution of the national population
by conditions of exclusion risk**

| Risk category | Values |
|---|---|
| In related terms | |
| Severe | 9.6% |
| High | 30.1% |
| Moderate | 29.6% |
| Low | 30.7% |
| *Total* | *100.0%* |
| In absolute terms | |
| Severe | 2,590,379 |
| High | 8,101,260 |
| Moderate | 7,979,437 |
| Low | 8,268,237 |
| *Total* | *26,939,313* |

3. Classifying the departments according to the severity level of risk in its population, three large groups have been able to be distinguished –Map of Exclusion:

   a. The departments with a high level of risk, registering over 80% of the population with severe and high levels. The departments of the southern Sierra, such as Huancavelica, Huánuco, Cajamarca, Ayacucho, Cuzco, Apurímac, and Puno, are in this group, as well as the departments located in the jungle, such as Amazonas, Loreto, San Martín, and Ucayali.

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[46] Just as the health insurance variable has a low weight due to its high negative association with poverty condition (higher level of poverty, lower level of insurance), it is possible that the variable for quality of health services is discarded from the index due to its association with the rural living condition of the individual.

[47] The thresholds for classifying the population according to risk levels were estimated using the clusters technique.

b.  The departments with an average level of risk, registering a percentage of the population concentrated at the moderate and high levels. This group is primarily represented by coastal departments, such as Ancash, La Libertad, Lambayeque, Moquegua, Piura, Tacna, and Tumbes, and departments of the Sierra such as Junín, Pasco and Madre de Dios.

c.  The departments with low level of risks, registering a percentage of the population concentrated at the low and moderate levels. The departments of Lima, Arequipa, and Ica belong to this group.

**Table 23: Departmental classification according to severity of the exclusion risk**

| Department | Population in risk of exclusion | | | | Category of risk |
|---|---|---|---|---|---|
| | Severe | High | Moderate | Low | |
| Huancavelica | 76.1% | 23.9% | 0.0% | 0.0% | Severe |
| Huanuco | 48.9% | 41.7% | 9.3% | 0.0% | High |
| Cajamarca | 40.3% | 47.1% | 12.6% | 0.0% | High |
| Ayacucho | 30.2% | 64.4% | 5.4% | 0.0% | High |
| Cusco | 29.8% | 60.0% | 10.2% | 0.0% | High |
| Apurimac | 26.1% | 65.6% | 8.3% | 0.0% | High |
| Puno | 23.4% | 76.6% | 0.0% | 0.0% | High |
| Amazonas | 19.5% | 71.7% | 8.8% | 0.0% | High |
| Ancash | 16.9% | 47.6% | 35.5% | 0.0% | Moderate |
| Arequipa | 0.0% | 4.5% | 41.0% | 54.5% | Low |
| Ica | 0.0% | 1.3% | 56.0% | 42.6% | Low |
| Junin | 0.0% | 28.9% | 71.1% | 0.0% | Moderate |
| La Libertad | 0.0% | 18.9% | 81.1% | 0.0% | Moderate |
| Lambayeque | 0.0% | 25.8% | 74.2% | 0.0% | Moderate |
| Lima | 0.0% | 0.2% | 14.1% | 85.7% | Low |
| Loreto | 0.0% | 99.9% | 0.1% | 0.0% | High |
| Madre de Dios | 0.0% | 0.6% | 99.4% | 0.0% | Moderate |
| Moquegua | 0.0% | 1.0% | 99.0% | 0.0% | Moderate |
| Pasco | 0.0% | 53.7% | 46.3% | 0.0% | Moderate |
| Piura | 0.0% | 41.4% | 58.6% | 0.0% | Moderate |
| San Martín | 0.0% | 81.6% | 18.4% | 0.0% | High |
| Tacna | 0.0% | 0.0% | 93.6% | 6.4% | Moderate |
| Tumbes | 0.0% | 0.0% | 89.7% | 10.3% | Moderate |
| Ucayali | 0.0% | 74.3% | 25.7% | 0.0% | High |
| *Peru* | *9.6%* | *30.1%* | *29.6%* | *30.7%* | *Moderate* |

### 3.4.3. PROFILE OF THE EXCLUDED POPULATION

The population with a high risk of exclusion is composed mainly of the poor population (87%) that resides in rural areas (80%) and forms part of the non-salaried work force (68%). In terms of age, the population with a high exclusion risk is located in the age range of 17-45 years (71%). This result is consistent with the hypothesis that the independent working age population has an opportunity and economic cost of reporting illness and as a result is found to be encouraged to repress its demand for health services.

**Table 24: Profile of the excluded population**

| Indicator | Category | Composition of high risk population | | |
|---|---|---|---|---|
| | | Urban | Rural Area | Peru |
| Sex | Men | 50% | 50% | 50% |
| Geographical area | Rural population | | | 80% |
| Poverty | Poor | 89% | 87% | 87% |
| EAP | Non-salaried EAP + dependents without contract | 67% | 68% | 68% |
| Education level | No education | 21% | 20% | 21% |
| | Primary | 53% | 52% | 53% |
| | Secondary | 21% | 24% | 21% |
| | University | 6% | 4% | 5% |
| Age | Children under 5 years old | 11% | 12% | 10% |
| | 5-17 years old | 31% | 36% | 31% |
| | 18-45 years old | 37% | 35% | 40% |
| | 45-65 years old | 14% | 12% | 14% |
| | Over 65 years of age | 6% | 5% | 6% |
| Insurance coverage | Uninsured | 62% | 70% | 58% |
| Indicators of demand for health services | Rate of care-seeking | | | |
| | High risk population | 42% | 34% | 38% |
| | Low risk population | 80% | 66% | 73% |
| | Out-of-pocket expenditure | | | |
| | High risk population | 2.20% | 2.00% | 2.00% |
| | Low risk population | 3.11% | 3.40% | 3.20% |

*Source: ENAHO 2001.*

In addition, this risk group consists of limited educational status (74%), reflecting cultural problems in access to health services (i.e. problem of diagnosis recognition). Finally, it should be emphasized that there is no observed differentiation at the level of gender. The phenomenon of exclusion indiscriminately affects men and women (50% of each gender).

- In Peru, slightly over half of its inhabitants live in poverty conditions. This characteristic is very linked to the partial and informal incorporation of the working-age population into the labor market, and compounded multi-ethnic and cultural patterns of exclusion.

- It has been identified that Social Protection policies, and specifically those related to Health, have not reached the level of State policies. The importance of developing a State policy is based on its capacity to provide stability to a proposal, so that it manages to modify institutional frameworks and introduce incentives and effective regulatory mechanisms into the markets,[48] in this way promoting mechanisms of social inclusion.

- In an economy in which the labor market absorbs only 25% of its population with full rights, the remainder takes the form of independent employment in small production units. It is necessary to develop complementary policies in two directions: a) create incentives for investment within the framework of economic, political, and social decentralization, a process that started and continues being implemented since November 2002; and b) increase the productivity of the small production units via the development of credit markets, access to training, and especially incentives to link the small, the medium and the large company and the State.

- In order to increase human capital, social inclusion is fundamental to the process. It is essential to expand the supply of public goods (infrastructure, education, health and nutrition) with sustainable strategies that guarantee their efficiency.

- Taking into account the growth of independent employment in Peru, its general informalization and the absence of effective mechanisms to incorporate such a population into health insurance schemes, it is advisable to rethink these proposals. To this end, a massive inclusion policy should be developed, seeking innovative mechanisms that make it possible to channel the savings and a part of the out-of-pocket health expenditures of the informal population groups with some ability to pay toward a collective insurance. This requires, in addition, a guarantee on the premiums for the poor population using public financing.

- The study shows the disposition of excluded groups to be incorporated into a public health insurance scheme. The focus groups carried out showed that a good part of this population would be willing to provide a prepayment differentiated according to income in exchange for a guarantee of access to comprehensive health services that are of quality (timely care and effective treatments).

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[48] The policies of market creation should not be confused with the policies of market liberalization. The latter assume that the market is already established. Such confusion is what has occurred in Peru in the 1990s.

- The measurement of social exclusion in health in Peru[49] indicates that the profile of the excluded population corresponds with poverty (87%), residence in rural areas (80%), and entrance into the non-salaried work force (68%). In terms of age, the population with high exclusion risk is located in the age range of 17-45 years (71%).

- In addition, this risk group consists of those with limited educational status (74%). A high proportion of the indigenous population (Andean and Amazon) fulfills all of the previous criteria for social exclusion in health.

- The excluded population in Peru has limited and delayed access to health services due to the following factors: a) the low perception of the right to health and to health status; b) low levels of quality and treatment perceived by the users, and c) the opportunity cost of reporting illness and seeking health services. As a result, this group has incentives to hold back its demand for health services. In this regard, the statistical results from the processing of the household consumption surveys underestimate the problem of social exclusion in health. For this reason, an econometric estimate has been carried out in order to quantify the problem.

- The statistical analysis shows differences in access to health services by gender, suggesting discriminatory patterns. In the qualitative analysis performed through focus groups, the women, especially those who are mothers, declared that they repress their demand for health services.

- Finally, the analysis suggests that the exclusion problem has to be confronted simultaneously from a systemic national and sectoral perspective. Such a perspective implies acting on basic markets (labor, insurance, credit), developing political institutionality (State policies in a decentralized context), and promoting civil rights and cultural values. In each case, it is important to strengthen the capacities of the most disadvantaged social issues. A policy concerning information (National Health Accounts, accountability) and awareness about the current levels of health financing and expenditure is a key part of the design of a consensus-based State policy (through social dialogue) among the principal economic and social agents to make social protection in health universal around the country.

Tables 25, 26, 27 and 28 present other statistical data.

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[49] The findings of this study are consistent with those in previous research (MINSA-PAHO, 1999).

**Table 25: Comparison of the exclusion indicators**

| Dimensions of exclusion | Source of exclusion | Category | Indicator | ENNIV 2000 | | ENAHO 2001 | | ENDES 2000 | | Other sources[2] | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Levels | % of population | Levels | % of population | Levels | % of population | Levels | % of population |
| External to the health system | Access barriers | Economic or financial | Population in poverty situation | 13,861,347 | 54% | 14,648,989 | 56% | n.a. | n.a. | n.a. | n.a. |
| | | | Population in extreme poverty situation | 3,798,740 | 15% | 6,493,467 | 24% | n.a. | n.a. | n.a. | n.a. |
| | | | Uninsured population | 16,888,210 | 66% | 19,014,731 | 73% | 19,326,701 | 72% | n.a. | n.a. |
| | | | Uninsured poor population | 10,231,028 | 40% | 11,647,341 | 45% | n.a. | n.a. | n.a. | n.a. |
| | | | Uninsured poor population that does not utilize health services for economic reasons | 6,367,498 | 25% | 6,570,100 | 25% | n.a. | n.a. | n.a. | n.a. |
| | | Geographical | People who live in places that are far from a health establishment | 2,862,411 | 11% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | | | Rural population | - | - | 10,359,065 | 39% | 8,937,804 | 33% | n.a. | n.a. |
| | | Work-related | Non-salaried and informal personnel[f] | 9,771,495 | 56% | 8,844,250 | 69% | n.a. | n.a. | n.a. | n.a. |
| | | Ethnic | Population that belongs to an ethnic minority group | 4,222,602 | 16% | 3,575,064 | 13% | n.a. | n.a. | n.a. | n.a. |
| Internal | Structure | Infrastructure | Shortage of beds | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | 5,141,885 | 20% |
| | | | Exclusion from III level care | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | 4,377,164 | 17% |
| | | Human capital | Shortage of doctors | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | 7,169,301 | 28% |
| | Processes | Supply of direct services | Non-institutional births | 1,211,295 | 5% | n.a. | n.a. | 8,975,480 | 33% | n.a. | n.a. |
| | | | Interruption in the immunization program | n.a. | - | n.a. | n.a. | 5,642,662 | 21% | n.a. | n.a. |
| | | | Number of pregnancies with below-standard number of check-ups | 6,258,202 | 24% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | | | Population at risk of self-exclusion due to insatisfaction with services | 2,611,521 | 11% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | | Supply of indirect services | People that lack water services | 630,140 | 26% | 9,359,015 | 36% | 9,687,237 | 41% | n.a. | n.a. |
| | | | People that lack sewerage services | 9,886,964 | 39% | 13,564,331 | 52% | 13,552,161 | 59% | n.a. | n.a. |
| | | | People that lack electricity services | 5,772,067 | 23% | 9,005,045 | 35% | 8,695,852 | 38% | n.a. | n.a. |
| | | | People that lack two or more basic services | 7,435,621 | 29% | 11,213,647 | 43% | 11,066,640 | 48% | n.a. | n.a. |

Note: n.a.: not available.

[1] The percentages of population are expressed in relation to the EAP.

[2] "Oficina General de Estadísticas" at MINSA.

**Table 26: Indicators of exclusion from social protection and from health services: Economic and financial** (as a percentage of the designed population)

| Designation | Poor population [1] | Population in extreme poverty | Uninsured population | Uninsured poor population | |
|---|---|---|---|---|---|
| | | | | Total | Population that does not utilize health services for economic reasons [2] |
| Metropolitan Lima | 45.2% | 4.7% | 57.5% | 23.4% | 12.8% |
| Urban Coast | 53.1% | 8.4% | 62.0% | 36.2% | 23.3% |
| Rural Coast | 64.4% | 27.3% | 75.0% | 51.2% | 31.2% |
| Urban Sierra | 44.3% | 6.6% | 57.3% | 50.0% | 29.8% |
| Rural Sierra | 65.5% | 30.2% | 78.1% | 51.5% | 34.8% |
| Urban | 51.5% | 11.6% | 67.0% | 38.3% | 25.0% |
| Rural Jungle | 69.2% | 31.5% | 78.9% | 55.3% | 33.1% |
| *Peru* | *54.1%* | *14.8%* | *65.9%* | *39.9%* | *24.8%* |

Note: [1] Both the population in extreme poverty and in non-extreme poverty is being considered.
[2] Income: ENNIV, 2000.

**Table 27: Spending on health services by socioeconomic conditions and the gender of the household head**
(as a percentage of family expenditure)

| Analytical dimension | Out-of-pocket expenditure in health | | | | Spending on food | |
|---|---|---|---|---|---|---|
| | ENNIV 2000 | | ENAHO 2000 | | ENNIV 2000 | |
| | Men | Women | Men | Women | Men | Women |
| Peru | 4.5% | 3.9% | 3.7% | 3.7% | 39.8% | 37.7% |
| By areas | | | | | | |
| Urban | 4.4% | 5.2% | 3.9% | 3.2% | 35.4% | 35.7% |
| Rural | 5.3% | 4.8% | 3.4% | 3.1% | 60.3% | 59.4% |
| By level of poverty | | | | | | |
| Extreme poverty | 2.8% | 1.9% | 3.1% | 2.3% | 61.8% | 60.8% |
| Non-extreme poverty | 3.7% | 3.7% | 3.5% | 2.8% | 50.0% | 48.6% |
| Non-poor | 5.0% | 4.0% | 3.9% | 3.5% | 34.2% | 32.6% |
| By level of education of head of household | | | | | | |
| No education | 9.8% | 4.1% | 4.4% | 3.4% | 52.1% | 51.3% |
| Initial | 5.8% | 5.5% | 4.1% | 1.5% | 48.3% | 43.6% |
| Primary | 4.3% | 2.9% | 4.1% | 3.3% | 43.1% | 31.7% |
| Secondary | 3.4% | 2.1% | 3.4% | 2.9% | 28.2% | 29.7% |
| University | 5.8% | 4.3% | 3.9% | 3.4% | 35.5% | 32.2% |
| By number of dependents | | | | | | |
| Less than or equal to 1 year of age | 4.6% | 4.0% | 3.5% | 3.3% | 40.5% | 37.8% |
| Between 1 and 2 years of age | 4.3% | 3.5% | 4.1% | 3.1% | 40.0% | 35.9% |
| Between 2 and 3 years of age | 5.7% | 4.8% | 3.1% | 2.4% | 38.2% | 43.2% |
| Between 3 and 4 years of age | 3.4% | 2.6% | 3.8% | 3.2% | 38.8% | 41.8% |
| Greater than 4 years of age | 4.1% | 2.3% | 3.0% | 3.2% | 42.8% | 38.8% |

**Table 28: Indicators of exclusion from social protection
and health services: Structure**

(as a percentage of the population of the department)

| Department | Supply of direct services | | | |
|---|---|---|---|---|
| | Non-institutional deliveries | Exclusion expanded to the total population [1] | Dropout rate from the vaccination plan | Exclusion expanded to the total population [2] |
| Amazonas | 73% | 68.7% | 35% | 33.3% |
| Ancash | 62% | 53.4% | 25% | 21.8% |
| Apurímac | 51% | 45.5% | 27% | 24.0% |
| Arequipa | 21% | 15.6% | 26% | 20.0% |
| Ayacucho | 53% | 41.8% | 41% | 32.5% |
| Cajamarca | 78% | 66.3% | 32% | 26.9% |
| Cusco | 61% | 54.4% | 29% | 26.0% |
| Huancavelica | 80% | 72.2% | 40% | 36.1% |
| Huánuco | 72% | 66.2% | 40% | 37.2% |
| Ica | 8% | 5.5% | 20% | 14.6% |
| Junín | 54% | 42.7% | 25% | 20.0% |
| La Libertad | 48% | 37.9% | 29% | 22.7% |
| Lambayeque | 43% | 34.1% | 26% | 20.8% |
| Lima y Callao | 13% | 9.6% | 22% | 16.3% |
| Loreto | 60% | 57.7% | 32% | 30.6% |
| Madre de Dios | 25% | 22.7% | 28% | 25.3% |
| Moquegua | 16% | 11.9% | 17% | 12.1% |
| Pasco | 49% | 42.4% | 42% | 36.0% |
| Piura | 37% | 28.8% | 15% | 12.0% |
| Puno | 79% | 66.4% | 31% | 26.0% |
| San Martín | 54% | 45.4% | 21% | 26.0% |
| Tacna | 18% | 13.2% | 15% | 10.8% |
| Tumbes | 14% | 11.6% | 10% | 8.3% |
| Ucayali | 54% | 43.0% | 27% | 21.9% |
| *Country total* | 48% | 33.3% | 28% | 20.9% |

*Note: [1] Adjusted for the fertility rate of the uninsured population and the average household size.*
*[2] Adjusted for the percentage of children of vaccination age among the uninsured population and the average household size.*
*Source: ENDES.*

## 3.5. PARAGUAY

### 3.5.1. GENERAL DATA

In Paraguay, the State recognizes the right to health as a fundamental human right, through the National Constitution and laws within the sector that guarantee health protection and promotion for all citizens. However, a significant proportion is excluded from the existing mechanisms that provide such protection for different reasons.

The health protection system is segmented and presents strong fragmentation at the supplier level, which has led to a lack of articulation of the different sub-sectors, aggravated by the lack of coordination or integration among suppliers. The coverage of the Paraguayan Social Security Institute (IPS) and private insurance is concentrated in Asunción and in the Central Department, and mainly in the medium- and high-income population. Almost all (98.6%) of the poorest population does not have health insurance. The public sector primarily serves the population belonging to the first three income quintiles.

Out-of-pocket expenditure is relevant (3% GDP), directed in good part at the purchase of medications (36.8%), and at others that are no less important, such as consultations in pharmacies, healer houses, etc., all symptoms of the limited development of insurance for services within the population.

**Table 29: Health expenditure**

| Concept | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| Total health expenditure / GDP | 6.5 | 6.5 | 7.2 | 8.4 | 8.4 |
| Spending by the MSP and BS / GDP | 1.1 | 1.2 | 1.3 | 1.4 | 1.3 |
| Spending by IPS / GDP | 1.1 | 1.5 | 1.6 | 1.8 | 1.4 |
| Public health expenditure / GDP | 2.5 | 3.0 | 3.3 | 3.4 | 2.9 |
| Private health expenditure / GDP | 3.8 | 3.6 | 4.0 | 5.1 | 5.4 |
| Public expenditure on health / Total public expenditure | 5.3 | 6.8 | 8.0 | 8.1 | 7.2 |
| Spending by the MSP and BS / Central adm. expenditure | 4.1 | 5.0 | 5.8 | 6.1 | 5.9 |

The measurement and determination of the causes of exclusion from social protection in health are difficult to estimate since they constitute a complex and multi-causal phenomenon. The disaggregation of the various exclusion indicators, considering income quintiles, poverty levels, the geographical area of residence, and the language spoken most frequently in the household, has permitted a better characterization of exclusion in the country.

**Table 30: Poverty lines** (values per person, October 1999)

| Area | Guaranies (monthly) | | US$ (daily) | |
|---|---|---|---|---|
| | Extreme | Total | Extreme | Total |
| Asunción | 105,995 | 235,359 | 1.1 | 2.4 |
| Central urban | 104,809 | 232,981 | 1.1 | 2.3 |
| Other urban | 79,549 | 145,412 | 0.8 | 1.5 |
| Rural | 54,745 | 87,269 | 0.6 | 0.9 |

*Note: Exchange rate in October 1999 = 3.311,7 Guaranies per US$.*

The ***satisfied demand***[50] has proven to be a relevant indicator for determining the profile of the excluded population in Paraguay. In 1999, on average 47% of this group did not seek care. The percentage was more divergent between the population classified by income quintiles (67% in the lowest quintile versus 27% in the highest quintile) than by the geographical area of residence (31% in Asunción versus 58% in the rural area) or by the language spoken most frequently in the household (57% if only Guaraní is spoken versus 37% if only Spanish is spoken). Exclusion, measured by this indicator, has increased since 1997/1998, given that during this period only 36% of this population did not seek for care.

Of the percentage of the population that does not seek care, the most excluded groups are made up of the population between 6 and 29 years of age, those who speak only Guaraní, those who do not have health insurance, those who have not attended formal educational institutions or have done so only at the primary level, those who have attended public educational institutions, those in the lower quintile of per capita income, those who do not have electricity in the household and have a common latrine as a type of sanitation service, and those who are supplied with water through a source or well without a pump. The most excluded also includes the unemployed, and among the employed, unremunerated family members, private workers and domestic workers, and those that work in the agricultural and construction sectors.

The figures from the Household Survey show that, in addition, those that do not seek care when they are sick self-medicate (80%), a fact that is reflected in the high percentage of spending on medications in these families. Of the total family expenditures on health, 36.7% is spent on drugs. In the rural area the situation is even more discernible, since the percentage of spending on medications corresponds to 47.2% of total health expenditures, and to 51.8% and 54% in the first (extremely poor) and second income quintiles of the population. Economic and geographical factors also play an important role.

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[50] The met demand is obtained by asking the person if, having felt ill from a non-mild affliction, he or she did or did not seek health services and for what reason.

**Table 31: Ill or injured population that sought care by sub-systems,
by quintiles (2000-2001)**

| Quintiles | Public | IPS | Private |
|---|---|---|---|
| Poorest 20% | 17.9% | 3.5% | 16.0% |
| Next 20% | 21.3% | 13.8% | 15.1% |
| Next 20% | 26.8% | 23.9% | 18.6% |
| Next 20% | 23.0% | 32.2% | 20.7% |
| Richest 20% | 10.9% | 26.6% | 29.7% |
| *Total* | *100.0%* | *100.0%* | *100.0%* |

The indicators analyzed demonstrate a high degree of existing inequities in the health sector in Paraguay, such as regional disparities in access to health services, the vulnerability of children and especially of the poor, in addition to that of those who speak only Guaraní. This problem would be even more serious since the quality of services and the timeliness of care has not yet been evaluated.

The same analysis utilizing the variable for the Guaraní language as the language most frequently used in the household provides the same results, with the only difference related to the age group, which would reflect additional exclusion in the group that is 50 years of age or older. The poverty line, in turn, makes it possible to classify as excluded the inactive and those who attend pre-school educational institutions.

### 3.5.2. OVERVIEW OF EXCLUSION IN HEALTH AND PROFILE OF THE EXCLUDED POPULATION

According to the household surveys, what percentage of the population is excluded from the health protection systems? The dimensions of exclusion in health are several. According to the Household Surveys, some of them are the following in the case of Paraguay:

- Of the total population that gets sick or injured (32%), 55% seeks care in some type of health establishment. Of this percentage, 81% goes to a public or private hospital, clinic, post, or dispensary, and the rest to a pharmacy, healer or others.

- Of the total sick or injured population that has insurance through the IPS, 70% goes to this entity, with a similar percentage observed in the case of the beneficiaries of the police or military health system. This percentage reaches 88% and 75% in the case of beneficiaries with an individual and work-based private insurance, respectively.

- In 1999, 47% of the "population in need of care or injured with non-mild affliction" did not seek care. Of this total, 3% did not do so for geographical reasons, 15% for economic reasons, 80% because they self-

**Table 32: Profile of those excluded**
(percentage in relation to each population group)

| Population group | | Excluded |
|---|---|---|
| Sex | Men | 42.3% |
| | Women | 35.3% |
| | Total | 38.6% |
| Age group | 0-5 years of age | 35.3% |
| | 6-17 years of age | 48.1% |
| | 18-29 years of age | 40,3% |
| | 30-49 years of age | 38.0% |
| | 50-64 years of age | 29.6% |
| | 65 years of age and older | 30.3% |
| | *Total* | *38.6%* |
| Language spoken most in the household | Guarani | 48.3% |
| | Guarani / Spanish | 29.3% |
| | Spanish | 28.1% |
| | Other | 38.4% |
| | *Total* | *38.6%* |
| Health insurance provider | IPS | 15.9% |
| | Personal private insurance | 17.8% |
| | Work-related private insurance | 10.3% |
| | Military health insurance | 20.7% |
| | Policy health insurance | 26.8% |
| | Uninsured | 44.1% |
| | *Total* | *38.6%* |
| Attendance at formal educational institutions | Pre-school | 38.7% |
| | Primary | 46.5% |
| | Secondary | 38.6% |
| | Superior | 27.4% |
| | University | 26.0% |
| | Special | 100.0% |
| | Does not attend | 44.9% |
| | *Total* | *38.6%* |
| Care-seeking institution | Public | 48.6% |
| | Private subsidized | 27.6% |
| | Other private | 22.2% |
| | *Total* | *38.6%* |
| Quintiles by per-capita income | Poorest | 58.2% |
| | II | 47.1% |
| | III | 36.8% |
| | IV | 28.9% |
| | Richest | 16.5% |
| | *Total* | *38.6%* |

medicated, and the remainder for other reasons. According to the values for this indicator, exclusion in health increased since 1997/1998 because during this period, 36% of the specified population did not seek care.

- According to the Constitution, all Paraguayan citizens are guaranteed a basic level of health coverage. However, only 20% of the population (1,120,000 inhabitants) has some type of health insurance.

- Thirty-one percent of deliveries in the country are "non-institutional."

- Forty-seven percent of pregnant women do not receive the recommended number of prenatal check-ups.

Exclusion responds to diverse causes that determine that the system, in practice, cannot guarantee health coverage for the entire population, which by legal mandate or affiliation is theoretically covered by it. One of the leading causes of exclusion is the **lack of adequate infrastructure**, which has to do with the delivery of health services and with service delivery that is not directly related to the health sector, but that affects it. Immunization coverage is one of the manifestations of this deficit.

- Of the total of children under five years of age, 82% has received the BCG vaccine; 68% measles; 81% some dose of anti-polio; and 79% some dose of Triple or DTP, in almost all cases with similar coverage starting from the first year of life. Sixty-one percent of children less than five years old have a complete immunization series.

- Health service delivery comes closer to being adequate through the number of physicians and beds per inhabitant, than through the number of establishments, since this indicator includes a broad diversity of entities of different size and complexity. In this regard, there are on average 3.9 physicians per every 10,000 population and 7.9 beds per every 10,000 population. In terms of the number of beds, it can also be indicated that the population in the higher income stratum (fifth quintile) has 60% more beds per inhabitant than the population in the poorer stratum (first quintile). In 87 districts of the country (40% with respect to the total number of districts), the number of beds per 10,000 population does not reach more than 3.8, implying that this affects half of the country's population.

- Forty-three percent of the population has health services without a WC and 53% is supplied with water that is not drinkable.

Another cause of social exclusion in health is the **barriers that prevent access to health care**; even in conditions in which adequate infrastructure exists. The related available information shows the following:

- The cost of transfer to the closest health center can be measured in terms of time. In this regard, 22% of the population that is in need of care or injured and seeks care is found at more than 30 minutes away in the urban area and at more than 60 minutes away in the rural area. It is worth adding that the average time utilized to reach the service

**Table 33: Profile of those excluded**
(percentage in relation to each population group)

| Population group | | Excluded |
|---|---|---|
| Electrical current | Yes, has | 35.8% |
| | Does not have | 60.8% |
| | *Total* | 38.6% |
| Type of sanitary service | WC, public network | 16.7% |
| | WC, blind well | 27.7% |
| | Municipal toilet | 40.0% |
| | Common latrine | 52.8% |
| | Other | 62.6% |
| | *Total* | *38.6%* |
| Type of water supply | CORPOSANA | 22.4% |
| | SENASA | 33.7% |
| | Private network | 38.0% |
| | Ycua or spring | 62.9% |
| | Well with pump | 34.5% |
| | Well without pump | 54.1% |
| | Other | 41.0% |
| | *Total* | *38.6%* |
| Condition of activity | Employed | 38.6% |
| | Unemployed | 45.6% |
| | Inactive | 39.3% |
| | *Total* | *38.6%* |
| Ocupational category | Public employee | 15.0% |
| | Private employee | 24.3% |
| | Public worker | 33.6% |
| | Private worker | 44.9% |
| | Employer or boss | 23.3% |
| | Independent | 39.8% |
| | Unremunerated family member | 61.5% |
| | Domestic worker | 36.6% |
| | *Total* | *38.6%* |
| Economic activity of the employer | Agriculture, ranching | 50.7% |
| | Work in mines, quarries | 35.6% |
| | Manufacturing | 38.3% |
| | Electricity, water | 3.2% |
| | Construction | 47.7% |
| | Commerce | 32.2% |
| | Transport | 29.5% |
| | Financial establishments | 35.6% |
| | Community services | 30.4% |
| | *Total* | 38.6% |

establishment is two times greater in the rural area than in the urban one, since the differences are greater when the transfer is done "on foot."

- In 1998, 7% of the total expenditure by the Central Government corresponded to the health sector, a percentage equivalent to 1.3% of GDP. Family spending on the same category (out-of-pocket expenditure) was equivalent to 3.0% of GDP.

- Four percent of total family spending in Paraguay corresponds to health expenditure, a percentage that is equivalent to US $244 per year. Of this amount, 37% goes toward medications; 30% toward services at hospitals, clinics, etc.; 12% toward dental expenditures and the remainder to other health areas. In Asunción, households spend US $489 per year on health, an amount that is 3.2 times greater than in the rural area.

- Open unemployment (the percentage of working age people that do not have work, but that wish to have it and have made some arrangement to this end) was 6.8% in 1999.

- In Paraguay, there is no discrimination by sex in enrollment, cost of plans, coverage of plans, co-payments or other payments, in some (one or more) of the existing health coverage systems. In the case of childbirth, however, the majority of plans impose conditions on the use of insurance after a certain effect period.

- If the definition of worker in the informal sector is taken into account as private workers that are neither managers nor professionals: for those who are independent; for unremunerated family members; for the employees, workers, or employers in companies with less than six workers, the proportion of this type of professionals applies to 64% of the country's workers. Using per capita income quintiles, it can be distinguished that 93% of the poorest workers (first quintile) are informal.

- Considering the comparison between current residence and that of five years ago, it is estimated that 15% of the country's workforce had a different residence, that is, can be considered an internal migrant.

- One-third of the population is in poverty conditions (that is, they have income below the total poverty line).

Information was not available for the following fundamental aspects:

- Means of transportation to access the closest health centers and the percentage of functionality of such means

- Percentage of workers affiliated with more than one insurance

- Barriers that account for the gap between legal and actual coverage

- Indigenous population (that in Paraguay only reaches 1.8% of the total population).

- External migrants

- Problems related to the quality of services granted, from the previous table

**Table 34: Summary of indicators of exclusion in health**

| Indicators | | Estimate of the excluded population | |
|---|---|---|---|
| | | 1997-1998 | 2000-2001 |
| Coverage | Legal | 100.0% | 100.0% |
| | Population that does not seek care when sick or injured | 51.6% | 51.4% |
| | Population sick or injured with a non-mild affliction that does not seek care | 26.1% | 38.6% |
| | Uninsured population | 80.1% | 81.1% |
| Accessibility | *Financial inaccessibility* | | |
| | Poverty | 33.7% | 33.9% |
| | Population with non-mild afflictions that does not seek care for economic reasons | 15.2% | 33.2% |
| | *Geographical inaccessibility* | | |
| | Population with non-mild afflictions that does not seek care for geographical reasons | 4.1% | 6.9% |
| | *Cultural inaccessibility* | | |
| | Indigenous population | - | 1.5% |
| | Population that speaks Guarani with greater frequency | 49.4% | 50.6% |
| | *Work-related inaccessibility* | | |
| | Total unemployment rate | 15.9% | 15.3% |
| | Population employed in the informal sector / Employed population | 63.8% | 63.4% |
| Structure | Deficit in the supply of medical services (physicians per 10,000 inhabitants) | 3.9% | 4.0% |
| | Deficit in the supply of beds (beds per 10,000 inhabitants) | 7.9% | 6.7% |
| Processes | Non-institutional births | 30.6% | 27.3% |
| | Below-standard prenatal check-ups | 46.6% | 35.7% |
| | Abandonment between the BCG and measles vaccine | 18.3% | 15.4% |
| | Population without access to potable water | 52.6% | 45.5% |

# 3.6. DOMINICAN REPUBLIC

## 3.6.1. GENERAL DATA

The Dominican Republic is a republican nation with a democratic Government, headed by an Executive Branch that the President of the Republic, a bicameral Legislative Branch, and a Judicial Branch. The country is politically and administratively organized into 31 provinces and a National District, with a total of 117 municipalities and 56 municipal districts. The estimated population for the year 2001 is 8,604,928 inhabitants, with 67% located in urban areas and 33% in rural areas. It is estimated that 28% of urban households and nearly 60% of rural households are poor, with about 8% of the population living in extreme poverty.

The Dominican Republic occupies 86th place in the country ranking, with an HDI value of 0.722 according to the Report on the Human Development Index (HDI) by the UNDP for 1999 data.

From 1994 to 2000, the country occupied the top places in leadership in economic growth in Latin America and the Caribbean. It is a country that has maintained sustained economic growth. The country's per capita income in 1995 went from US $1,410 in 1990 to US $2,080 in 1999, which represented an increase of 47%, and exceeded US $2,100 in the year 2000. This situation contrasts with the economic performance of the Dominican Republic in the 1980s. In the 1981-1990 period, the average growth of the Gross Domestic Product was 2.3%, versus 5.9% in the 1991-2000 period. In turn, the average inflation rate in the 1980s was 28.9%, versus 7.5% in the nineties.

The well-balanced progress of the Dominican economic dynamic in the nineties is determined by multiple factors, among which are macroeconomic stability, improvement in public infrastructure, incentives for duty-free zones and tourism sectors, the growing flow of international remittances, the dynamism of the United States, the socioeconomic principal of the country, and the growth of foreign investment. This result has been strengthened by the capitalization process of public companies. It should be emphasized that in 1990 a series of economic and legal reforms were initiated that aimed at modernizing the legal framework and facilitating an environment favorable to investment. Among the most significant reforms that had tariffs, the following can be mentioned: tributary, labor, judicial and most recently the capitalization of public companies.

The orientation of the economic growth model toward services has not implied that the Dominican Republic escapes from the volatility of growth that has characterized Latin America in the nineties. With this new model arise new challenges related to the growing external vulnerability of the economy. The dramatic deceleration of the Dominican economy in 2001 is precisely evidence of the high level of vulnerability, in particular, when confronting the deceleration of the growth of the world economy, affecting the flow of tourists toward the country and of exports from duty-free zones to the United States.

The most dynamic and generalized sectors of the economy still face serious challenges with respect to growing international competition. The trade agreements promoted at the bilateral and regional levels and within the World Trade Organization (WTO) try to eliminate to the greatest degree possible the entry barriers for goods and services that are exported at the global level.

This persistent economic growth has not corresponded with a sustainable strengthening of development on a human and social scale. That is, there is no correspondence of the production of wealth with the promotion of an environment that provides viability for the exercise of the full right of human capabilities.

This sustained economic growth has not been corresponded with a sustainable strengthening of development to human and social scale. That is, there is not a correspondence between the production of wealth and the establishment of conditions to foster people's right to develop their human capabilities. This fact points out the relationship between economic growth and human development. Recent data from the last Human Development Report of the United Nations Program in 2001 reveal the divorce between growth and human development. The report indicates that the position of the country with respect to the human development index is 19 out of 26 countries in Latin America and the Caribbean. However, the position of the country with respect to the GDP index is 13 out of 26, while its position on the index of life expectancy and schooling is 21 and 20 respectively. While the country has had excellent performance in the economic area in the last 10 years, and has been a leader in economic growth in the Region in the last five years, its social development indicators have remained behind. This proposes the paradox that economic growth generates social exclusion, leaves the higher risk groups unprotected and generates little impact on human development.

In accordance with the protocol for the Study of Social Protection Systems in Health in four countries of Latin America and the Caribbean, the results for Social Exclusion in Health in the Dominican Republic are presented. It is pertinent to point out that while for many countries of the Americas, health reforms started 20 years ago, the reform and modernization process of the Dominican health sector began less than ten years ago. The year 2001 was the period that was approved definitively in Congress and was promulgated by the Executive Branch for the legal and regulatory framework of reform in health and social security.

**Table 35: General country data**

| | |
|---|---|
| Number of inhabitants | 8,604,928 |
| Per-capita income | 2,200 |
| Urban population | 67% |
| Rural population | 33% |
| Poor urban households | 28% |
| Poor rural households | 60% |
| Extreme poverty | 13.6% |
| Human ID (87[h] place / 174) | 0.729 |
| Unemployment rate | 13.8% |

## 3.6.2 Overview of exclusion in health and profile of the excluded

Social exclusion in health in the Dominican Republic provides evidence of hundreds of thousands Dominicans that are unprotected by the Health System. This result shows that six million people are excluded from social security (prior to Law 87-01), that 141,000 children under five receive no type of immunizations, that 229,000 people over 65 years of age do not have quality health care, that almost one million episodes of domestic violence are not reported, and that 400,000 families have someone mentally ill in their household that does not receive care. Nevertheless, in the last decade, the country has improved the majority of its global health indicators. Life expectancy has increased substantially.

**Table 36: Excluded population**

| Indicator | Relation % | Excluded population |
|---|---|---|
| Excluded from health services | 31.4% | 2,113,912 |
| Uninsured people | 76.4% | 6,574,167 |
| Children under 5 years of age with no immunizations | 15.5% | 141,507 |
| Institutional deliveries | 4.3% | n.a. |
| People over 65 years of age without quality care | 28.0% | 113,424 |
| Without access to potable water (urban level) | 17.0% | 880,628 |
| Without access to potable water (rural level) | 49.6% | 1,698,681 |
| Without access to an urban sewage system | 4.6% | 278,287 |
| Without access to a rural sewage system | 21.1% | 722,624 |

*Note: n.a. = not available.*

The financing of the predominant health services is by direct out-of-pocket expenditure by families: $55.5 of every 100 dollars that are spent on the health sector are paid directly out-of-pocket by families, especially poorer families. This is evidenced in the information on financing, health expenditure and service performance, primarily based on the realization of the National Health Accounts (CNS). There are dispersions and deficiencies observed in the information regarding financing, expenditure, and service performance, not only among the different institutions and agents, but also within a single institution. The low insurance coverage of the population and the deviation of health investment toward personnel expenses and the construction of infrastructure all stand out.

It is noteworthy that 55% of the total health expenditure comes directly out of the pocket of the household heads and is allocated to the direct payment of both public and private health services.

This out-of-pocket expenditure by families is considered very high; particularly if it is assessed that the per capita GDP for the year 1999 was US $2,000

(actual) and that the country shows significant rates of critical poverty in rural and urban areas. This situation deepens the inequities in the sector, since households with fewer resources carry out proportionately greater direct health expenditures than those with higher income. In addition, cost recovery from the services of SESPAS hospitals is heterogeneous and subjective. There are no rates of cost recovery or regulation in this regard, and supervision is limited to an internal audit of the hospitals.

According to the study of national accounts, both the public and private sub-sectors designate approximately 50% of their expenditure to curative care and low percentages to promotion and prevention activities. Certain concern has been expressed recently in the private sub-sector, especially NGOs, to increase financing for this type of activities. In the public sub-sector, the health promotion strategy has been strengthened with the following measures: a) the formation of health committees; b) the education of the UNAPs; c) the development of health education campaigns to prevent STDs/AIDS and Dengue, and for immunization, among others. In this context the need for making health promotion a true strategy with inter-sectoral action and with reorientation of the national health system is identified. Administrative expenditures constitute a significant proportion of the total expenditures of the public health sector, since 64.5% of its budget is allocated to pay salaries and wages.

**Table 37: Health expenditure**

| Indicator | RD$ (millions) | Percentage |
|---|---|---|
| GDP | 183,532.20 | 100.0% |
| Health spending | 11,918.70 | 6.5% |
|     Households | 7,441.20 | 4.1% |
|     Other private | 1,365.80 | 0.7% |
| Total private sector | 8,807.00 | 4.8% |
|     General Government | 2,627.40 | 1.4% |
|     Other public | 176.70 | 0.1% |
| Total public sector | 2,804.10 | 1.5% |
| Rest of the world | 307.50 | 0.2% |

Dominican society is inequitable in terms of education, employment, income, protection regarding risks and threats, and access to quality health services, drinkable water, and systems for disposal of excrete and solid waste. The most disadvantaged populations are located in the poor neighborhoods of the principal cities, among the immigrant population, and in the 12 provinces of the southwest, central, and eastern regions of the country, whose environments are unhealthy. Pregnant women, newborns, poor women that live alone and, in particular, adolescents and certain groups of workers in agriculture and in the infor-

mal sector, are especially vulnerable groups. Most of the mentally ill and people affected by chronic non-communicable diseases, such as hypertension and diabetes, and those who are ill due to cancer and other degenerative processes, are also excluded, especially the elderly.

**Table 38: Social exclusion in health (2001)**

| Indicators | As relates to the population of the country | Population excluded |
|---|---|---|
| Uninsured | 76.4% | 6,574,167 |
| Children under 5 years of age with no administered immunization | Average of 5 immunizations: 15.5% Standard deviation: 8.7% | From 62.080 to 220.339 children on average, 141,507 children |
| Number of institutional deliveries as a percent of the total deliveries | 4.3% | n.a. |
| Population over 65 years of age without quality care | 382,767 | 229,660 |
| Arterial Hypertensives without quality care | 20% (1,157,985) | 199,153 |
| Cases of violence against women not cared for or reported | 64% | 1,024,586 without reporting |
| Families with mentally ill members who do not receive care | 25% | 400,229 families |
| Diabetics without care | 20% (17,209) | 86,049 |
| Patients with TB who abandon treatment | 37 per 100,000 | 1,914 |
| Households without preventive Dengue control | 45% urban households | 603,345 |
| Number of empty hospital beds | Occupancy rate: 43% 1.57 beds per 100,000 inhabitants | 9,051 beds not providing care |
| Population without access to potable water at the rural level (60.2% of the population resides at the urban level) | 17.0% | 880,628 |
| Population without access to potable water at the rural level (39.8% of the population resides at the rural level) | 49.6% | 1,698,681 |
| Population without access to a sewerage system at the urban level (60.2% of the population reside at the urban level) | 4.6% | 238,287 |
| Population without access to a sewerage system at the rural level (39.8% of the population resides at the rural level | 21.1% | 722,624 |
| Population of informal sector workers and independent workers from the Economically Active Population (EAP) and with unemployement of 18.0% | 46% | 1,320,200 |

*Note: n.a. = not available.*
*Source: Studies by SESPAS-PAHO-PHR-USAID, IDH-2000-PNUD, CERSS-Bernardo Defilló, Arismendi Díaz Santana and otros. CIPAF-SEM, Population: 8.604.928, Number of Households: 2.001.146.*

The diversification of the labor market and the great growth of the informal economy help to increase the exclusion in health situation. In the Dominican Republic, around 60% of the EAP is unemployed or involved in the informal economy; 15.8% of the population is excluded for this reason.

**Table 39: Excluded poulation by occupational category (2000)**

| Occupational categories | Workers | Dependents | Total | Percentage |
|---|---|---|---|---|
| Formal | 1,493,386 | 1,792,064 | 3,285,450 | 40.29% |
| Informal | 1,626,863 | 1,952,236 | 3,579,099 | 43.89% |
| Non-remunerated | 72,262 | 86,715 | 158,977 | 1.95% |
| Unemployed | 514,307 | 617,169 | 1,131,476 | 13.87% |
| *Total* | *3,706,818* | *4,448,184* | *8,155,002* | *100.0%* |

| | | |
|---|---|---|
| Excluded | 1,291,200 | 15.82% |
| Total population | 8,161,822 | |

As a whole, the current Model of Care for People is fragmented: it is of a curative nature and with private predominance in financing and provision; it is very induced by demand and very centered on medical curative actions; it shows a strong trend toward specialization and hospital-based activity; it offers poor quality, with very limited participation of individuals and communities in the management of services and in health promotion activities. In this context, due to the initiative of SESPAS, the development of a New Model of Care (NMA) has started, characterized by a focus on Primary Health Care (APS) that seeks comprehensive care for people. It generates the redistribution of resources by providing a Primary Care Unit (UNAPS) for every 500 to 700 families that live in a single sector.

With regard to a steering role and regulation, the current Government, after a creative process of final negotiation, has promulgated two fundamental laws to impact social exclusion and improve social protection in health. Health Law 42-01 and Social Security Law 87-01 guarantee the regulatory framework necessary for expanding health care and improving social inclusion. The evaluation of the essential public health functions (EPHF) shows weaknesses in the steering role and regulation of the health sector. In human resources, there is clear awareness that the labor market situation and the policies of selection, appointment, and management of personnel at SESPAS and at IDSS are inadequate. They are not directly associated with productivity and quality, they generate lack of motivation, and they influence negatively on quality of care; thus, they should be changed.

The SESPAS health services network is in the process of modernization, through rebuilding and expanding. The large hospitals are in the process of re-modeling and re-equipping. And although 400 rural and urban rehabilitated clin-

ics are registered, it can be indicated that a great effort should be made in the organization of the supply and distribution of the demand for levels of care in agreement with Social Security Law 87-01. SESPAS is promoting a regulation program for clinical laboratories and blood banks, with the participation of the public and private sub-sectors that should still provide results.

**Table 40: Health insurance coverage (2000)**

| System | Affiliates | Percentage |
|---|---|---|
| Dominican Institute of Social Security (IDSS) | 571,328 | 7.0% |
| ISFFAPOL | 244,855 | 3.0% |
| Private | 979,419 | 12.0% |
| Double coverage | -114,266 | -1.4% |
| Insured | 1,681,335 | 20.6% |
| SESPAS | 3,917,675 | 48.0% |
| Total | 5,599,010 | 68.6% |
| Excluded | 2,562,812 | 31.4% |
| Total population | 8,161,822 (1,569,581 households) | |

Despite the existence of Social Security Institutions and of a diversity of insurance and prepayment companies, both nonprofit and for-profit, the coverage of social security and in particular of health insurance reaches just 24% of the population. If some cases of double enrollment are considered (for example, the case of employees of productive public corporations that are affiliated with IDSS and also have private insurance), coverage is even more deficient. The theoretical coverage of SESPAS, obtained by difference, is 76%. However, the actual coverage would be around 60% and only for certain services. Furthermore, insurance and prepayment companies do not have any regulation or supervision with regard to the plans offered, the quality of services, and the fulfillment of contracts, etc. Therefore, the vulnerability that the population undergoes in accessing health care and in the regulation of the service supply when it exists is apparent, all due to the health insurance situation.

The process of decentralization and deconcentration in health has advanced significantly with the establishment and development of the DPS/DAS and the Regional Health Bureaus (DRS). Health management bodies have addressed the problems of the territories, a politically defined population, and this process has contributed in important ways to epidemiological surveillance and to the reduction of infant and maternal mortality. However, challenges of this process are observed: a) ensuring the complete and permanent transfer of resources and competencies; b) the development of supervision as a learning process in decen-

tralized management; c) the assumption of the new Law of Health and Social Security in the area of each territorial agency; and d) the development of the capabilities of the DPS/DRS for the management and steering role of the Provincial and Regional Health System so that these systems are capable of improving both health status and efficiency, effectiveness, equity and social participation.

The characterization of social exclusion in health in the country is a tool for expenditure targeting, for the detection of disadvantaged populations, for the management of the process of decentralization and deconcentration, and for decision-making in health programs. Social exclusion can be adversely impacted as a result of human development that is restricted, postponed and marginalized due to the politics, plans and programs that the State offers to its citizenship. If it is studied, policies, plans and projects can be defined to reduce these phenomena. These programs and projects should assure the rising quality of life and equity in access to opportunities for sustainable human development. If its network of causes and effects is affected, concrete solutions for impact emerge.

**Table 41: Health insurance coverage (2001)**

| Entities | Population coverage | Insured population | Insurance plans |
|---|---|---|---|
| Dominican Institute of Social Security (IDSS) | 7.1% | 610,949 | Coverage of medical services, coverage of wor-related accidents, coverage of pensions |
| Social Security Institute of the Armed Forces and the National Police | 2.5% | 215,123 | Coverage of medical services, coverage of work-related accidents, coverage of pensions |
| Private companies, private insurers, and Igualas Médicas insurers | 12.0% | 1,032,591 | Coverage of medical services |
| Self-managed insurance for teachers, physicians, sales people (*billeteros*) and others | 2.0% | 172,098 | Coverage of medical services |
| *Total population* | *23.6%* | *2,030,761* | |

*Source: SESPAS-PAHO, "Evaluación del Proceso de Reforma y Perfil de Servicios de Salud." Dominican Republic, 2001.*
*Expenditures of the Health Sector by function and by sub-sectors, 1996 (in US$). Population: 8,604,928 inhabitants, 1998.*

**Table 42: Health insurance coverage and health expenditure (1996)**

| Entities | Covered population | Health expenditure (US$) | Per-capita expenditure on health (US$) |
|---|---|---|---|
| Dominican Institute of Social Security (IDSS) | 610,949 | 59,124,000 | 96.77 |
| Social Security Institute of the Armed Forces and the National Police | 215,123 | 5,686,000 | 26.43 |
| Private companies, private insurers, and Igualas Médicas insurers | 1,032,591 | 85,857,688 | 83.15 |
| Self-managed insurance for teachers, physicians, sales people (*billeteros*) and others | 172,098 | 14,326,312 | 83.24 |
| *Total population* | *2,030,761* | *164,994,000* | Average = 72.40 Standard deviation = 27.11 |

*Source: "Cuentas Nacionales de Salud de República Dominicana, 1996." Study sponsored by PAHO/WHO, USAID-PHR. Exchange rate: 13.75 RD$ per US$. Report of the Banco Central. UNDP, Human Development in the Dominican Republic, June, 2000.*

CHAPTER 4

# COMPARATIVE ANALYSIS

As mentioned in chapter 2, two information sources were utilized for the comparative analysis:

a) The results obtained from the country studies carried out by the national teams

b) An econometric analysis of the health exclusion variables in the countries

## 4.1. ANALYSIS OF THE RESULTS FROM THE COUNTRY STUDIES

The countries where the study was conducted have population sizes that range from 5.6 to 27 million inhabitants, public spending in health that is in general lower than the average for the region, and a proportion of population that is poor at around the regional average. The result of the measurement of the indicators of exclusion in health in the six countries that participated in the study point on one hand to barriers of entry or factors "external" to the health system, and on the other hand to "internal" factors or factors that are characteristic of the health system. These factors can be found in the following tables.

**Table 43: Exclusion in health measured through indicators "external" to the system (barriers of entry)**

| Indicators | Ecuador | Guatemala | Honduras | Paraguay | Peru | Dominican Republic | Latin America & the Caribbean |
|---|---|---|---|---|---|---|---|
| Population (millions of inhabitants) | 12,645,495 | 11,700,000[3] | 6,600,000[2/6] | 5,634,342 | 26,400,000[2] | 8,604,928 | 523,600,000[6] |
| Percentage of rural population | 37.0% | 60.6% | 56.0% | 43.0% | 38.0% | 34.0%[1] | n.a. |
| Percentage of population below the poverty line | 55.9% | 56.7% | 64.4% | 33.7% | 56.0% | 29.0% | 29.7%[1] |
| Percentage of population below the extreme poverty line | 21.0% | 27.0% | 47.4% | 15.05% | 24.0% | 13.0% | n.a. |
| National per-capita income (US$ current) | 1,210[1] | 1,680[1] | 860[1] | 1,400[1] | 2,080[1] | 2,130[1] | n.a. |
| National per-capita income (US$ adjusted PPP) | 2,910[1] | 3,770[1] | 2,400[1] | 4,450[1] | 4,660[1] | 5,710[1] | 3,580[6] |
| Workers in the informal sector as a percentage of the total mass of workers | n.a. | 68.0% | 56.0% | 64.0% | 46.0% | 46.0% | n.a. |
| Total health expenditure (percentage of GDP) | 3.7% | 4.4%[3] | 6.7%[2] | 6.4% | 4.8%[2] | 6.5% | 6.0%[7] |
| Public spending in health (percentage of GDP) | 1.2%[2] | 2.3%[2] | 4.3%[2] | 3.0%[2] | 2.8%[2] | 2.0% | 3.2%[4] |
| Public spending in health (percentage of total health expenditure) | 23.7% | 27.3% | n.a. | 20.3% | 23.0% | 31.0% | 53.6%[5] |
| Out-of-pocket expenditure (percentage of total health expenditure) | 29.7% | 31.0% | 36.8%[5] | 51.0% | 30.9%[5] | 55.5% | 39.3%[5] |
| Percentage of population without real health coverage* | 77.0% | 82.2% | 83.1% | 79.9% | 73.0% | 76.4% | n.a. |
| Years of measurement (udp) | 1997-2001 | 1997-2001 | 1997-2001 | 1997-2001 | 1996-2001 | 1996-2001 | 1995-2001 |

Note: n.a. = not available. *This corresponds to the difference in total real coverage of the entire system including public, social security, community-based and private.
udp: The last available year was utilized for all of the data.
Sources: The majority of the data that are shown were obtained in this study. When it is not thus, the source is indicated for each case. [1]"Situación de salud en las Américas. Indicadores básicos 2002." Special Program for Health Analysis. PAHO/WHO. [2]"Human development Report 2003 – Millenium Development Goals: A Compact among nations to end human poverty. United Nations Development Programme –UNDP. [3]"World development indicators 2001" World Bank. [4]"Health systems inequalities and poverty in Latin America and the Caribbean" PAHO/UNDP/World Bank. In the chapter: Health sector reform inequalities and poverty in Guatemala, Pg. 8. [5]"The World Health Report 2000" OMS. [6]"Latin America & Caribbean Data Profile, The World Bank Group, 2001. [7]"Este dato no corresponde a un promedio, sino a un rango. Carmelo Mesa-Lago en "Shielding the poor. Social protection in the developing world", Chapter 8. Published by Nora Lustig. Inter American Development Bank, Washington D.C., 2001. [9]"Estadísticas para América Latina y el Caribe." United Nations Children's Fund - UNICEF, 2000.

**Table 44: Exclusion in health measured by indicators that are "internal" or characteristic of the health system**

| Indicators | Ecuador | Guatemala | Honduras | Paraguay | Peru | Dominican Republic |
|---|---|---|---|---|---|---|
| Type of health protection system | Segmented | Segmented | Segmented | Segmented | Segmented | Segmented |
| Life expectancy at birth (years) | 70.5 | 65.5 | 65.8 | 70.7 | 69.5 | 66.9 |
| Percentage of rural population that lives at more than one hour from a primary care cente with adequate problem-solving ability | 3.86% | n.a. | 18.8% | 22.0% | 9.0% | 10.0% |
| Percentage of urban population that lives at more than 30 minutes from a primary care center with adequate problem-solving ability | n.a. | n.a. | n.a. | 22.0% | 2.0% | 0.0% |
| Percentage of population of indigenous origin or African descent that is not regularly covered by a basic package of health services | 13.9% | 49.0% | 14.0% | n.a. | 13.0% | n.a. |
| Number of doctors / nurses per every 10,000 population | 5 (nurses) | n.a. | 8.4 | 3.9 (phys.) | 8.3 / 3.2 | 18.6 and 3.0[1/] |
| Level and distribution of hospital beds per inhabitant | n.a. | n.a. | 6.7 | n.a. | n.a. | n.a. |
| Number of hospital beds per every 10,000 inhabitants | n.a. | n.a. | 9.0 | 7.9 | 17.7 | 23 |
| Proportion of non-institutional deliveries | n.a. | n.a. | 45.6% | 31.0% | 48.0% | 5.0%[2/] |
| Proportion of pregnant women who do not reach the standard number of prenatal check-ups | n.a. | n.a. | 17.4% | 47.0% | 24.0% | 3.0%[3/] |
| Dropout rate between the BCG vaccine and the vaccine with the lowest percentage of coverage | 25.4% | n.a. | 9.96% | 18.0% | 28.0% | 25.0%[4/] |
| Percentage of children under 5 years of age without a complete immunization series for their age | n.a. | n.a. | 16.3% | 39.9% | n.a. | n.a. |
| Percentage of population without access to a sewerage system | n.a. | 71.2% | 47.0% | 43.0% | 52.0% | 55.4% |
| Percentage of population without access potable water | 60.0% | 38.8% | 26.0% | 53.0% | 36% | 45.0% |
| Percentage of population without real health coverage[5/] | 20.7% | 33.0%[5/] | 39.3% | 47.0% | 31.0% | 20.0% |

Source: n.a. = not available. [1/] Dominican Medical Association (AMD), May 2000, which reported a total of 15,670 doctors, with an estimated population of 8,400,000 inhabitants; and the Association of Graduate Nurses (AEG), March 200, which reported 2,603 nurses. [2/] In 1999, 95% of births took place in hospitals. [3/] In 1999, 97% of pregnant women received prenatal care, although the average number of appointments is not documented. [4/] Based on the reports of the applied doses by PAI/SESPAS, the rate of abandonment between BCG and HepB3 (third dose of Hepatitis B) is 30%; for BCGxDPT3, it is 25%. [5/] This corresponds to the difference in total real coverage of the entire system including public, social security, community-based and private.

The analysis of the exclusion in health situation carried out in the countries shows that there are certain factors that are systematically associated with exclusion in health. They are: poverty; rurality; unemployment and informal employment; ethnic factors (in the case of Paraguay, cultural or language-related are considered instead) and factors related to the organization and structure of the health system. In the following table, the factors associated with exclusion in health are shown by country.

**Table 45: Principal factors associated with exclusion in health**

| Country | Principal factors associated with exclusion in health |
|---|---|
| Ecuador | - Poverty, mainly extreme poverty<br>- Income inequity<br>- Membership in an indigenous community, especially if it is located in a rural environment<br>- Fragmentation and segmentation of the health protection system<br>- Insufficiency of the network of basic services (sanitation, education, health) with greater vulnerability in the poorer areas of the country |
| Guatemala | - Poverty, mainly extreme poverty<br>- Indigenous origin<br>- Living in a rural community<br>- Unemployment, underemployment, informal employment<br>- Low public spending in health<br>- Fragmentation and segmentation of the health protection system |
| Honduras | - Poverty<br>- Indigenous origin and African descent<br>- The informal nature of employment<br>- Living in a rural community<br>- Deficit of adequate health system infrastructure, with regard to the beds/inhabitants and physicians/inhabitants, with a high concentration of resources in the richest cities of the country (Tegucigalpa and San Pedro Sula) |
| Paraguay | - Being monolingual in Guarani<br>- Poverty<br>- Fragmentation and segmentation of the health protection system<br>- Existence of geographical barriers (living in rural communities or far from urban centers)<br>- The informal nature of employment |
| Peru | - Poverty<br>- Living in a rural community<br>- Lack of public, sanitation and electricity services within households<br>- Racial descrimination<br>- Deficit of adequate infrastructure in the health system, especially for care of pregnant women<br>- The informal nature of employment<br>- Limited educational status |
| Dominican Republic | - Inadequate and disorganized distribution of health services<br>- High out-of-pocket expenditure as the mode of financing for health care, which is highly regresive (proportionately, the poorest spend three times more on health than what the richest spend)<br>- Low coverage of the existing health insurance systems<br>- Fragmentation and segmentation of the health protection system<br>- Poor quality of health care<br>- Unemployment, underemployment, informal employment<br>- Limited regulation |

RELATIONSHIP BETWEEN THE EXCLUSION FACTORS IN HEALTH

Upon analyzing some of these factors, important degrees of correlation were obtained, as shown in the following figures. These associations were then confirmed by the econometric analysis of the exclusion variables, as will be seen further on.

PUBLIC SPENDING IN HEALTH AND HEALTH COVERAGE

In accordance with the data obtained in the national measurements, a strong association seemed to exist between public spending in health and the lack of health coverage, as observed in the figure below.

**Graph 2: Public Expenditure on health
(percentage of total expenditure on health)
vs. percentage of population without current health coverage**



Correlation coefficient: 0.71

■ Public expenditure in health (% of GDP)  □ Population without current health coverage

RURALITY

The population that lives in the rural environment suffers from exclusion in health in diverse areas and for diverse reasons. In accordance with the data obtained in the national studies, rurality seems to have a strong association with lack of actual coverage and lack of coverage by insurance. This translates into disproportionately high out-of-pocket expenditure for this population, as shown in the following figures:

**Graph 3: Percentage of rural population that lives
at more than 1 hour from a primary health care center
vs. percentage of population without health coverage**



Correlation coeficient: 0.8

■ Population that lives at more than 1 hr from a primary health care center   □ Population without current health coverage

**Graph 4: Percentage of rural population that lives
at more than 1 hour from a primary health care center
vs. percentage of population without health insurance**



Correlation coefficient: 0.7

■ Population that lives at more than 1 hr from a primary health care center   □ Population without health insurance

**Graph 5: Percentage of rural population that lives
at more than 1 hour from a primary health care center
vs. percentage of out-of-pocket expenditure**



Correlation coefficient: 0.5

■ Population that lives at more than 1 hr from a primary health care center  □ Out-of-pocket expenditure

## POVERTY

In accordance with the data obtained in the national studies, poverty appears strongly associated with lack of coverage for basic health services such as professional assistance during delivery, as shown in the following figure.

**Graph 6: Percentage of non-institutional births
vs. percentage of population below the poverty line**



Correlation coefficient: 0.87

■ Non-institutional births  □ Population below the poverty line

## Eᴛʜɴɪᴄ ꜰᴀᴄᴛᴏʀ

Indigenous origin appears strongly associated with exclusion in health, as measured through lack of coverage, in the countries studied. The population of indigenous origin without access to a regular set of basic health services seems to be a factor determining low actual health coverage in the countries. This translates into high out-of-pocket expenditure for these populations and in addition manifests itself in a high infant mortality rate in the countries, as can be observed in the following figures.

**Graph 7: Percentage of indigenous population
not regularly covered by health services
vs. percentage of population without current health coverage**



*Correlation coefficient: 0.99*

■ Indigenous population without health coverage    □ Population without current health coverage

**Graph 8: Percentage of indigenous population not regularly covered
by health services vs. percentage of out-of-pocket expenditure
(percentage total health spending)**



*Correlation coefficient: 0.96*

■ Indigenous population without health coverage    □ Out-of-pocket expenditure

**Graph 9: Percentage of indigenous population not regularly covered by health services vs. infant mortality rate per 1,000 live births**



*Correlation coefficient: 0.94*
■ Indigenous population without health services □ Infant mortality rate

## CONTAINMENT OF THE DEMAND FOR HEALTH

It can be observed that poverty is a permanent companion of exclusion in health in the countries in the study. An important consequence of this relationship is the containment of the demand for health, as opposed to the perceived need. If those who feel sick or injured are asked where they seek for care, it could result that a percentage of the respondents declares that they did not seek for care. In the case of Paraguay, for example, the household survey EPH ´99 shows that 51% of the population that claimed to have been ill or injured in the last three months did not seek for care at any establishment. If this phenomenon is analyzed by income strata, it is verified that the percentage of the high-income population (fifth quintile) that sought care is two times greater than the percentage of the poor population (first quintile) that did so. Furthermore, the average per capita health expenditure in the first quintile group is six times lower than the average per capita health expenditure in the fifth quintile, even though, proportionately the out-of-pocket expenditure is greater in the low-income quintiles.

## 4.2. ECONOMETRIC ANALYSIS OF THE EXCLUSION IN HEALTH VARIABLES: THE COMPOSITE INDEX OF EXCLUSION

The average index of exclusion for the group of countries analyzed is located at a level of 0.287, which would indicate that the population in these areas has a high risk of exclusion in health, as shown in the data in the table below. Disaggregating the index into the components that define it, it is observed that this level would be explained mainly by the high degree of vulnerability of the excluded population (exclusion gap), more than by the volume of population that is not involved in the system.

Considering that the optimal situation is that in which people do not face any type of exclusion, the magnitude of the exclusion in health phenomenon in the countries can be appraised upon observing the following. On average, *47% of the population* in the four countries is excluded from health protection, and the degree of affectation of these people is high (74%), which means that the excluded group exhibits high degrees of exclusion for most of the indicators utilized in the measurement.

**Table 46: Index of exclusion (FGT2) by geographical area**

| Country | Excluded population | Exclusion gap | Variability of excluded population | Global index of exclusion | Ranking |
|---------|---------|---------|---------|---------|---------|
| Ecuador | 51% | 75% | 1.05 | 0.320 | 3 |
| Honduras | 56% | 69% | 0.92 | 0.316 | 2 |
| Paraguay | 62% | 68% | 0.96 | 0.349 | 4 |
| Peru | 40% | 75% | 1.17 | 0.253 | 1 |
| *Region* | *47%* | *74%* | *1.09* | *0.287* | |

The high level of the exclusion gap is important because it reveals two fundamental aspects of exclusion in health for the population classified as excluded. In the first place, it shows that the population with exclusion in health faces multiple sources of exclusion in all of the countries and, in the second place, that their degree of exclusion is almost total exclusion.

In terms of the development of policies, these results suggest that policies aimed at mitigating this situation should not be focused on a single dimension or factor of exclusion, but should be multi-sectoral and inter-sectoral. This will be observed with greater emphasis in the following point, which analyzes the specific weight of the exclusion factors.

In relative terms, Peru shows fewer exclusion risks (index of 0.253 in contrast to the average value of 0.287), while the populations of Honduras, Ecuador, and Paraguay show a greater social vulnerability, both in number of population excluded and in the degree of exclusion,[51] producing an index of 0.316, 0.32, and 0.35, respectively.

Although the gap or degree of exclusion is high and similar in the four countries (a range between 68% and 75%), the interregional differences in the levels of exclusion risk are attributed to discrepancies in the volume of the excluded population. The percentage of population excluded in Honduras is 1.4 times the level that registers in Peru, while in the case of Paraguay, this ratio amounts to 1.5 times the level registered in Peru.

## 4.3. Specific weight of
### the exclusion factors in health

The breakdown of the index according to the contribution of the exclusion factors (table 47) reveals that the factors that would explain exclusion vary between the countries:

### Peru

In the case of Peru, factors external to the health system contribute more to explaining this phenomenon than those linked to the health system itself (internal dimension): entry barriers explain 54% of the exclusion risk in this country, while the variables associated with problems in the health supply account for 46% of this risk.

Within the group of external factors, poverty (13%) and the rural condition of inhabitants (16%) stand out, followed closely by the lack of public utilities for sanitation and electricity in households (13%), and to a lesser extent by ethnic discrimination (7%). It is noteworthy that the small influence of the health insurance variable could reflect the high correlation between this variable and the poverty condition of the individual, which means that part of this effect might be absorbed by the variable for poverty situation.

With regard to the factors linked to the internal dimension of the health system, process-related variables such as the supply of basic health services, non-institutional childbirths and below-standard pregnancy check-ups are most influ-

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[51] As was mentioned, this result should be taken referentially since the index of exclusion for Ecuador may be biased by the insufficiency of information.

ential, explaining 16% and 12% of the value of the index of exclusion, respectively. Just as the variable for individual health insurance has low weight due to its high negative association with the poverty condition (with a higher level of poverty equivalent to less insurance), it is possible that the variable for quality of health services is ruled out from the index due to its association with the rural condition of the individual's housing.

## ECUADOR

Unlike Peru, in Ecuador the factors linked to the supply of health services or the internal dimension of exclusion contribute more to explaining this phenomenon (59%) than those linked to entry barriers (41%).

In the first group, factors related to deficits in the infrastructure of public establishments of greater complexity (21%) and to the supply of physicians (13%) stand out; followed by the supply of essential services, such as the abandonment of the immunization program (11%). With regard to the factors linked to the external dimension, the poverty situation and ethnic discrimination are most notable, explaining 23% and 7% of the value of the index of exclusion, respectively.

## PARAGUAY

As in Peru, the factors linked to the external dimension of exclusion (barriers of entry) contribute more to explaining this phenomenon than those linked to the internal dimension, although with disagreement in the composition of the relevant variables. In this regard, it is noteworthy that entry barriers explain 53% of the exclusion risk in health in this country, with barriers related to work (13%), ethnicity (8%) and the delivery of public services (23%) accounting for greater relative contribution. In turn, factors associated with problems of supply and/or processes explain 47% of this risk, emphasizing the variables for the supply of services (processes), such as non-institutional childbirths and below-standard pregnancy check-ups, which together explain 28% of the value of the index of exclusion.

## HONDURAS

In the case of Honduras, factors linked to the internal dimension of exclusion (structure and supply of services) contribute more to explaining this phenomenon than those linked to factors external to the health system, with the former explaining 55% of the exclusion risk in this country, while the variables associated with external factors explain 45% of this risk.

SPECIFIC WEIGHT OF THE FACTORS IN GLOBAL TERMS

In general, in all of the countries studied, the causes that stand out within the first group of factors (internal or characteristic of the health sector) are those related to the supply of physicians (25%) and those related to the supply of essential health services (non-institutional deliveries), with the latter factor explaining 19% of the value of the index. With regard to the factors linked to the external dimension, barriers of an economic nature stand out, with marked emphasis on the lack of access to a health insurance scheme and geographical factors, which explain 17% and 11% of the value of the index of exclusion, respectively. As occurs in Peru, it is possible that in all of the countries, the high association between the lack of access to a health insurance scheme and the poverty level lead to that part of the effect of the poverty situation may be absorbed by the variable of lack of health insurance.

## 4.4. MAP OF THE EXCLUDED POPULATION

Segmenting the population into categories of exclusion risk, it is observed that Peru registers the lowest percentages of population with severe risk of exclusion (9.6%), while in the rest of the countries; this population ranges from 22% (Ecuador) to 37.3% (Paraguay). In absolute terms, the population that registers critical levels of risk amounts to 1.7 million in Honduras, 2.1 million in Paraguay, 2.6 million in Peru, and 2.8 million in Ecuador. The data are shown in the table below.

**Table 47: Distribution of national population
by conditions of exclusion risk**

| Risk category | Peru | Honduras | Paraguay | Ecuador |
|---|---|---|---|---|
| *In relative terms* | | | | |
| Severe | 9.6% | 26.5% | 37.3% | 22.0% |
| High | 30.1% | 29.7% | 24.6% | 29.0% |
| Moderate | 29.6% | 27.5% | 16.8% | 24.0% |
| Low | 30.7% | 16.3% | 21.3% | 15.0% |
| *Total* | *100.0%* | *100.0%* | *100.0%* | *100.0%* |
| *In absolute terms* | | | | |
| Severe | 2,590,379 | 1,775,174 | 2,103,070 | 2,827,326 |
| High | 8,101,260 | 1,990,995 | 1,385,138 | 3,755,826 |
| Moderate | 7,979,437 | 1,839,728 | 974,491 | 4,374,369 |
| Low | 8,268,237 | 1,092,019 | 1,198,643 | 1,856,296 |
| *Total* | *26,939,313* | *6,697,916* | *5,634,342* | *12,813,817* |

Within each country, the following critical areas have been identified, that is, areas with a percentage of the population with levels of severe and high risk above 60%:

- In Ecuador four cantons have been identified as severe risk and 11 as facing a high risk in terms of their exclusion situation. The cantons of Bolívar, Cañar, Cotopaxi, and Las Esmeraldas are found in the first group. The cantons of Chimborazo, Imbabura, Loja, Los Ríos, Manabí, Morona Santiago, Napo, Pastaza, Sucumbíos, Tungurahua, and Zamora are located in the second group.

- In Honduras, five provinces at severe risk and ten in a state of high risk of exclusion have been identified. The first group consists of the provinces of Colón, Lempira, Ocotopeque, Olancho, and Intibuca. In turn, the provinces with a high percentage of population with high exclusion risk are: Atlántida, Comayagua, Copán, Choluteca, El Paraíso, Gracias a Dios, Isla de la Bahía, La Paz, Valle and Yoro.

- In Paraguay, five departments are at severe risk, while three departments are classified as at high risk for exclusion. The departments in a critical situation are Concepción, San Pedro, Guará, Caaguazu, and Caazapu. In the second group are the departments of Cordillera, Itapua, and Paraguari.

- In Peru, eleven departments have been identified with levels of severe and high risk of exclusion in health, emphasizing the departments of the southern sierra, such as Huancavelica, Huánuco, Cajamarca, Ayacucho, Cuzco, Apurímac, and Puno, and the departments located in the jungle, such as Amazonas, Loreto, San Martín and Ucayali.

- In Guatemala, the excluded populations are in the highlands in the north and west of the country.

- In the Dominican Republic, the excluded populations are located in the twelve provinces in the Southwest, Central and Eastern Regions of the country and in the poor neighborhoods of the principal cities.

## 4.5. PROFILE OF THE EXCLUDED POPULATION

In all of the countries, the population with a high risk of exclusion in health is composed primarily by the poor population (87% in the case of Peru and Honduras) that resides in rural areas (between 60% and 80%) and that are part of the workforce that is independent or dependent without an employment contract (68%).

There is a high degree of negative association between the poverty level and affiliation with some health insurance schemes; that is, given greater poverty, there is lower affiliation with health insurance schemes. Furthermore, there is a strong association between labor conditions (work force that is independent

or dependent without an employment contract) and no health insurance affiliation.

In terms of age, the population with a high risk of exclusion in health is located in the age range of 18-65 years (between 47% and 54%). This result is consistent both with the hypothesis of under-reporting of needs that results as a consequence of the lower social positioning of individuals and with the high opportunity cost and economic cost of reporting oneself as ill in a population that does not have stable employment and that functions at subsistence levels. As a result, people are encouraged to repress their demand for health services.[52]

In addition, this risk group consists of a population with limited educational status (between 74% and 90% of the excluded population has a level of instruction that is lower than primary), reflecting cultural problems in accessing health services (i.e. problems with recognition of the diagnosis).

Finally, it should be emphasized that no differentiation at the level of gender is captured with the indicators utilized. The exclusion phenomenon seems to indiscriminately affect men and women (50% of each gender) at the level of analysis carried out. Nevertheless, there are important signs of discrimination toward girls in the Peruvian case, of discrimination toward women with regard to waiting periods for care in the Ecuadorian case, and of discrimination toward female household heads in the Guatemalan case, that suggest the need for more in-depth examination of more specific indicators and of those that link age and sex.

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[52] "Equidad en la Atención de Salud, Perú 1997" Pan American Health Organization-Ministry of Health, Peru, 1999, and Madueño, Miguel in "Perú: Análisis de Demanda y Servicios de Salud." Technical document prepared for the 2000-Ministry of Health Project, Government of Peru, 2002.

**Table 48: Who are the people excluded from health?**

| Country | Excluded |
|---|---|
| Ecuador | - The poor<br>- People of indigenous origin<br>- People who live in the rural sector |
| Guatemala | - The poor<br>- People of indigenous origin<br>- Women, especially if they are heads of household<br>- People who live in the rural sector<br>- Unemployed and underemployed people, and workers in the informal sector |
| Honduras | - The poor<br>- People who live in the rural sector<br>- Unemployed and underemployed people, and workers in the informal sector<br>- People who have a low level of instruction |
| Paraguay | - People in the lowest income quintile<br>- People who speak only Guarani<br>- People between 6 and 29 years old and those older than 50 years<br>- People who do not have health insurance<br>- People who have not received formal instruction or have only received it at the primary level<br>- The unemployed<br>- Private workers<br>- Domestic workers<br>- Workers in the agricultural and construction sectors |
| Peru | - The poor<br>- Unemployed people, workers in the informal sector |
| Dominican Republic | - The poor<br>- Immigrants of Haitian origin<br>- Children under 5, adolescents, and people over 65 years of age<br>- Women, especially the poor, heads of household and pregnant women<br>- Agricultural and informal workers |

**Table 49: Ecuador: Classification of the population
according to exclusion risk** *(number of people)*

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Azuay | 147,688 | 240,964 | 238,206 | - | 626,858 |
| Bolivar | 163,462 | 20,203 | - | - | 183,666 |
| Cañar | 177,956 | 39,064 | - | - | 217,020 |
| Carchi | - | - | - | 168,261 | 168,261 |
| Chimborazo | 130,879 | 213,539 | 80,789 | - | 425,207 |
| Cotopaxi | 251,895 | 51,593 | - | - | 303,489 |
| El Oro | 102,116 | 166,610 | 291,120 | - | 559,846 |
| Esmeraldas | 113,791 | 185,658 | 134,535 | - | 433,984 |
| Galápagos | - | - | - | 331,600 | 331,600 |
| Guayas | 663,000 | 1,081,736 | 1,676,315 | - | 3,421,051 |
| Imbabura | 97,739 | 159,469 | 72,546 | - | 329,755 |
| Loja | 135,310 | 220,768 | 72,932 | - | 429,010 |
| Los Ríos | 181,354 | 295,893 | 185,596 | - | 662,844 |
| Manabí | 342,064 | 558,105 | 367,675 | - | 1,267,844 |
| Morona Santiago | 34,862 | 56,880 | 51,605 | - | 143,347 |
| Napo | 25,607 | 41,779 | 20,128 | - | 87,514 |
| Pastaza | 14,199 | 23,166 | 23,889 | - | 61,255 |
| Pichincha | - | 0 | 1,109,810 | 1,356,435 | 2,466,245 |
| Sucumbíos | 36,309 | 59,241 | 49,223 | - | 144,774 |
| Tungurahua | 169,867 | 277,151 | - | - | 447,018 |
| Zamora | 39,229 | 64,005 | - | - | 103,234 |
| *Total population* | *2,827,326* | *3,755,826* | *4,374,369* | *1,856,296* | *12,813,817* |

**Table 50: Ecuador: Departmental classification
according to severity of exclusion risk**

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Azuay | 24% | 38% | 38% | 0% | High |
| Bolivar | 89% | 11% | 0% | 0% | Severe |
| Cañar | 82% | 18% | 0% | 0% | Severe |
| Carchi | 0% | 0% | 0% | 100% | Low |
| Chimborazo | 31% | 50% | 19% | 0% | High |
| Cotopaxi | 83% | 17% | 0% | 0% | Severe |
| El Oro | 18% | 30% | 52% | 0% | Moderate |
| Esmeraldas | 26% | 43% | 31% | 0% | Severe |
| Galápagos | 0% | 0% | 0% | 100% | Low |
| Guayas | 19% | 32% | 49% | 0% | Moderate |
| Imbabura | 30% | 48% | 22% | 0% | High |
| Loja | 32% | 51% | 17% | 0% | High |
| Los Ríos | 27% | 45% | 28% | 0% | High |
| Manabí | 27% | 44% | 29% | 0% | High |
| Morona Santiago | 24% | 40% | 36% | 0% | High |
| Napo | 29% | 48% | 23% | 0% | High |
| Pastaza | 23% | 38% | 39% | 0% | High |
| Pichincha | 0% | 0% | 45% | 55% | Moderate |
| Sucumbíos | 25% | 41% | 34% | 0% | High |
| Tungurahua | 38% | 62% | 0% | 0% | High |
| Zamora | 38% | 62% | 0% | 0% | High |
| *Total population* | *22%* | *29%* | *34%* | *14%* | *High* |

**Table 51: Honduras: Classification of the population
according to exclusion risk** *(number of people)*

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Atlantida | 153,061 | 175,352 | 22,737 | - | 351,150 |
| Colón | 170,242 | 76,758 | 4,686 | - | 251,686 |
| Comayagua | 177,167 | 162,329 | 22,622 | - | 362,118 |
| Copan | 166,411 | 116,755 | 12,449 | - | 295,615 |
| Cortés | - | 507 | 279,496 | 962,684 | 1,242,687 |
| Choluteca | 26,447 | 354,937 | 16,665 | - | 398,049 |
| El Paraíso | 25,216 | 314,753 | 18,407 | - | 358,376 |
| Francisco Morazán | - | 27,271 | 1,060,759 | 121,184 | 1,209,214 |
| Gracias a Dios | 6,558 | 62,755 | 303 | - | 69,616 |
| Intibuca | 132,298 | 48,326 | 4,673 | - | 185,297 |
| Islas de la Bahía | 19,462 | 19,048 | 785 | - | 39,295 |
| La Paz | 99,384 | 56,202 | 5,178 | - | 160,764 |
| Lempira | 200,229 | 53,920 | 2,707 | - | 256,856 |
| Ocotepeque | 63,483 | 43,037 | 4,180 | - | 110,700 |
| Olancho | 266,256 | 119,699 | 41,488 | 1,752 | 429,195 |
| Santa Bárbara | - | 29,275 | 312,900 | 6,399 | 348,574 |
| Valle | 7,604 | 138,616 | 7,748 | - | 153,968 |
| Yoro | 261,356 | 191,455 | 21,945 | - | 474,756 |
| *Total population* | *1,775,174* | *1,990,995* | *1,839,728* | *1,092,019* | *6,697,916* |

**Table 52: Honduras: Departmental classification
according to severity of exclusion risk**

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Atlantida | 44% | 50% | 6% | 0% | High |
| Colón | 68% | 30% | 2% | 0% | Severe |
| Comayagua | 49% | 45% | 6% | 0% | High |
| Copan | 56% | 39% | 4% | 0% | High |
| Cortés | 0% | 0% | 22% | 77% | High |
| Choluteca | 7% | 89% | 4% | 0% | High |
| El Paraíso | 7% | 88% | 5% | 0% | High |
| Francisco Morazán | 0% | 2% | 88% | 10% | Moderate |
| Gracias a Dios | 9% | 90% | 0% | 0% | High |
| Intibuca | 71% | 26% | 3% | 0% | Severe |
| Islas de la Bahía | 50% | 48% | 2% | 0% | Severe |
| La Paz | 62% | 35% | 3% | 0% | Severe |
| Lempira | 78% | 21% | 1% | 0% | Severe |
| Ocotepeque | 57% | 39% | 4% | 0% | Severe |
| Olancho | 62% | 28% | 10% | 0% | Severe |
| Santa Bárbara | 0% | 8% | 90% | 2% | Moderate |
| Valle | 5% | 90% | 5% | 0% | High |
| Yoro | 55% | 40% | 5% | 0% | High |
| *Total population* | *27%* | *30%* | *27%* | *16%* | *High* |

**Table 53: Paraguay: Classification of the population
according to exclusion risk** *(number of people)*

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Asunción | 0 | 84,206 | 1,901 | 506,554 | 592,661 |
| Concepción | 185,148 | 43,085 | 58,403 | 810 | 287,446 |
| San Pedro | 324,656 | 11,062 | 54,269 | 700 | 390,687 |
| Cordillera | 152,915 | 71,326 | 58,779 | 7,245 | 290,265 |
| Guairá | 86,597 | 26,206 | 20,995 | 2,498 | 136,296 |
| Caaguazú | 300,761 | 70,145 | 97,550 | 3,546 | 472,002 |
| Caazapá | 128,406 | 17,091 | 12,190 | 1,964 | 159,651 |
| Itapúa | 262,033 | 118,640 | 120,629 | 8,844 | 510,146 |
| Misiones | 33,009 | 26,557 | 20,364 | 10,002 | 89,932 |
| Paraguarí | 128,515 | 26,670 | 33,877 | 1,670 | 190,732 |
| Alto Panamá | 193,142 | 241,089 | 177,503 | 22,287 | 634,021 |
| Central | 102,229 | 482,976 | 182,427 | 629,314 | 1,396,946 |
| Ñeembucú | 44,724 | 66,350 | 28,241 | 1,392 | 140,707 |
| Amambay | 29,110 | 62,503 | 17,639 | 1,562 | 110,814 |
| Canindeyú | 87,215 | 11,021 | 32,962 | 255 | 131,453 |
| Pdte. Hayes | 44,610 | 26,211 | 29,762 | - | 100,583 |
| *Total population* | *2,103,070* | *1,385,138* | *947,491* | *1,198,643* | *5,634,342* |

**Table 54: Paraguay: Departmental classification
according to severity of exclusion risk**

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Asunción | 0% | 14% | 0% | 85% | Low |
| Concepción | 64% | 15% | 20% | 0% | Severe |
| San Pedro | 83% | 3% | 14% | 0% | Severe |
| Cordillera | 53% | 25% | 20% | 2% | High |
| Guairá | 64% | 19% | 15% | 2% | Severe |
| Caaguazú | 64% | 15% | 21% | 1% | Severe |
| Caazapá | 80% | 11% | 8% | 1% | Severe |
| Itapúa | 51% | 23% | 24% | 2% | High |
| Misiones | 37% | 30% | 23% | 11% | Moderate |
| Paraguarí | 67% | 14% | 18% | 1% | Severe |
| Alto Panamá | 30% | 38% | 28% | 4% | Moderate |
| Central | 7% | 35% | 13% | 45% | Moderate |
| Ñeembucú | 32% | 47% | 20% | 1% | Moderate |
| Amambay | 26% | 56% | 16% | 1% | Moderate |
| Canindeyú | 66% | 8% | 25% | 0% | Moderate |
| Pdte. Hayes | 44% | 26% | 30% | 0% | Moderate |
| *Total population* | *37%* | *25%* | *17%* | *21%* | *High* |

**Table 55: Peru: Classification of population
according to exclusion risk** *(number of people)*

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Cajamarca | 609,663 | 713,141 | 190,609 | - | 1,513,413 |
| Huanuco | 399,798 | 340,794 | 76,260 | - | 816,852 |
| Cusco | 362,452 | 730,182 | 124,315 | - | 1,216,949 |
| Huancavelica | 349,033 | 109,802 | - | - | 458,835 |
| Puno | 292,603 | 956,711 | - | - | 1,249,314 |
| Ancash | 189,065 | 531,338 | 395,698 | - | 1,116,101 |
| Ayacucho | 169,623 | 361,083 | 30,388 | - | 561,094 |
| Apurimac | 122,642 | 308,190 | 39,122 | - | 469,954 |
| Amazonas | 84,351 | 310,390 | 38,243 | - | 432,984 |
| Arequipa | - | 50,231 | 459,143 | 609,774 | 1,119,148 |
| Ica | - | 9,172 | 383,186 | 291,562 | 683,920 |
| Junin | - | 362,566 | 893,487 | - | 1,256,053 |
| La Libertad | - | 284,297 | 1,216,361 | - | 1,500,658 |
| Lambayeque | - | 291,681 | 839,591 | - | 1,131,272 |
| Lima | - | 17,167 | 1,204,056 | 7,327,044 | 8,548,267 |
| Loreto | - | 924,461 | 818 | - | 925,279 |
| Madre de Dios | - | 616 | 103,396 | - | 104,012 |
| Moquegua | - | 1,571 | 159,310 | - | 160,881 |
| Pasco | - | 143,943 | 123,954 | - | 267,897 |
| Piura | - | 677,847 | 958,370 | - | 1,636,217 |
| San Martín | - | 581,405 | 130,887 | - | 712,292 |
| Tacna | - | - | 274,562 | 18,841 | 293,403 |
| Tumbes | - | - | 182,220 | 21,016 | 203,236 |
| Ucayali | - | 342,430 | 118,611 | - | 461,041 |
| *Total population* | *2,590,379* | *8,101,260* | *7,979,437* | *8,268,237* | *26,939,313* |

*Source : ENAHO 2001, ENDES 2000, "Oficina General de Estadística" of MINSA.*

**Table 56: Peru: Departmental classification
according to severity of exclusion risk**

| Departments | Severe | High | Moderate | Low | Total |
|---|---|---|---|---|---|
| Cajamarca | 40.3% | 47.1% | 12.6% | 0.0% | High |
| Huanuco | 48.9% | 41.7% | 9.3% | 0.0% | High |
| Cusco | 29.9% | 60.0% | 10.2% | 0.0% | High |
| Huancavelica | 76.1% | 23.9% | 0.0% | 0.0% | Severe |
| Puno | 23.4% | 76.6% | 0.0% | 0.0% | High |
| Ancash | 16.9% | 47.6% | 35.5% | 0.0% | Moderate |
| Ayacucho | 30.2% | 64.4% | 5.4% | 0.0% | High |
| Apurimac | 26.1% | 65.6% | 8.3% | 0.0% | High |
| Amazonas | 19.5% | 71.7% | 8.8% | 0.0% | High |
| Arequipa | 0.0% | 4.5% | 41.0% | 54.5% | Low |
| Ica | 0.0% | 1.3% | 56.0% | 42.6% | Low |
| Junin | 0.0% | 28.9% | 71.1% | 0.0% | Moderate |
| La Libertad | 0.0% | 18.9% | 81.1% | 0.0% | Moderate |
| Lambayeque | 0.0% | 25.8% | 74.2% | 0.0% | Moderate |
| Lima | 0.0% | 0.2% | 14.1% | 85.7% | Low |
| Loreto | 0.0% | 99.9% | 0.1% | 0.0% | High |
| Madre de Dios | 0.0% | 0.6% | 99.4% | 0.0% | Moderate |
| Moquegua | 0.0% | 1.0% | 99.0% | 0.0% | Moderate |
| Pasco | 0.0% | 53.7% | 46.3% | 0.0% | Moderate |
| Piura | 0.0% | 41.4% | 58.6% | 0.0% | Moderate |
| San Martín | 0.0% | 81.6% | 18.4% | 0.0% | High |
| Tacna | 0.0% | 0.0% | 93.6% | 6.4% | Moderate |
| Tumbes | 0.0% | 0.0% | 89.7% | 10.3% | Moderate |
| Ucayali | 0.0% | 74.3% | 25.7% | 0.0% | High |
| *Total population* | *9.6%* | *30.1%* | *29.6%* | *30.7%* | *Moderate* |

*Source: ENAHO 2001, ENDES 2000, "Oficina General de Estadística" of MINSA.*

**Table 57: Risk of exclusion by individual attributes**

| Indicator | Categories | Percentage of population with high risk | | |
|---|---|---|---|---|
| | | Honduras | Paraguay | Ecuador |
| Sex | Men | 56% | 62% | 41% |
| | Women | 56% | 61% | 40% |
| Poverty | Poor | 54% | 77% | 54% |
| | Non-poor | 18% | 53% | 16% |
| EAP | Dependent | 42% | 38% | 27% |
| | Non-salaried + dependents without contract | 66% | 73% | 56% |
| | Unemployed | 58% | 55% | 23% |
| Education level | No education | 65% | n.d. | 59% |
| | Primary | 59% | n.d. | 52% |
| | Secondary | 36% | n.d. | 28% |
| | University | 15% | n.d. | 17% |
| Age | Under 5 years of age | 61% | n.d. | 48% |
| | 5-17 years of age | 61% | n.d. | 47% |
| | 18-45 years of age | 51% | n.d. | 36% |
| | 46-65 years of age | 53% | n.d. | 37% |
| | Over 65 years of age | 56% | n.d. | 38% |
| Insurance coverage | Without coverage | 71% | 70% | 45% |
| | With coverage | 2% | 26% | 35% |

*Note: n.a. = not available*

**Table 58: Profile of the excluded population**

| Indicator | Categories | Composition of high risk population | | |
|---|---|---|---|---|
| | | Honduras | Paraguay | Ecuador |
| Sex | Men | 49% | 50% | 50% |
| Geographical area | Rural population | 72% | 60% | 80% |
| Poverty | Poor | 84% | 42% | 87% |
| EAP | Non-salaried EAP + dependents without contract | 65% | 36% | 68% |
| Education level | No education | 37% | n.a. | 21% |
| | Primary | 53% | n.a. | 53% |
| | Secondary | 9% | n.a. | 21% |
| | University | 1% | n.a. | 5% |
| Age | Under 5 years of age | 19% | n.a. | 10% |
| | 5-17 years of age | 37% | n.a. | 31% |
| | 17-45 years of age | 34% | n.a. | 40% |
| | 45-65 years of age | 10% | n.a. | 14% |
| | Older 65 years of age | 0.3% | n.a. | 6% |
| Insurance coverage | Uninsured | 99% | 91% | 58% |
| Indicators of demand for health services | Rate of care-seeking<br>High risk<br>Low risk<br>Out-of-pocket expend.<br>High risk<br>Low risk | n.a.<br>n.a.<br><br>n.a.<br>n.a. | n.a.<br>n.a.<br><br>n.a.<br>n.a. | 38%<br>73%<br><br>2.0%<br>3.2% |

*Note: n.a. = not available*

## CHAPTER 5

# CONCLUSIONS

## 5.1. VALIDITY OF THE METHODOLOGICAL GUIDE AND OF THE METHODOLOGY UTILIZED

The methodological proposal contained in the guidelines for the characterization of exclusion utilized in this study proved to be:

- Applicable by national teams of diverse technical capabilities in different countries and compatible with existing information systems in the countries

- Useful in describing the phenomenon to be studied in its different dimensions

- Flexible, since it makes it possible to incorporate additional elements in accordance with the special characteristics of the country, without weakening its comparability, and complementing the information contained in the guide.

- Replicable, since it was applied in various countries, under different conditions, and in different time periods.

- Consistent in terms of the internal coherence among its components, since, as shown in chapters 3 and 4, the information analysis resulting from the country studies was confirmed by the global econometric analysis.

In turn, the group of methodologies utilized in this study for the characterization of exclusion in health proved to be highly explanatory of the exclusion in health phenomenon in its different dimensions and also, in an integrated manner.

The characterization of exclusion carried out in this way can constitute an important instrument for the definition of country-specific policies.

The results of the study confirm the initial premises of the study, namely:

- Exclusion in health is an entity that is distinguishable and possible to characterize.

- It is possible to identify indicators to measure exclusion in health.
- Exclusion in health can be utilized as a measure of the success or failure of the policies designed to improve health status.
- Health protection systems are not neutral concerning exclusion in health but, on the contrary, can determine various degrees of exclusion depending on their structure. It is possible to identify the elements that determine exclusion within a system's architecture.

## 5.2. LIMITATIONS OF THE METHODOLOGY

- The methodology utilized is highly dependent on the indicators selected to make the measurement, such that a limited selection of indicators will bring serious restrictions to the diagnosis.
- The great amount of information required to conduct the study poses the risk that not all of the information will be available in all of the countries.
- There are aspects of exclusion in health that are necessary to analyze more in-depth with more specific studies, especially those related to the quality of the services delivered, the gender variable and the ethnic/cultural component.

## 5.3. LESSONS LEARNED

- Exclusion in health is a new concept that presents methodological challenges in terms of its characterization. Therefore, it is necessary to explore further into its study and to generate greater awareness concerning the existence of this phenomenon.
- The analysis of health problems is benefited by using an approach that includes the perspective of social exclusion in health. It not only makes it possible to identify the excluded groups and their principal deficiencies with precision, but also to distinguish causative factors of exclusion mainly structural and to those who are responsible for the sector itself, who as a result are susceptible to a more immediate approach. Furthermore, exclusion in health can be utilized as an indicator of success for interventions designed to improve the health status of people.
- The variables external to the health system such as poverty, rurality, ethnic discrimination, and the informal nature of employment, have a strong explanatory value in the exclusion in health phenomenon in the countries studied. In this context, it can be stated that certain elements that differentiate social exclusion also emerge clearly when studying exclusion in health. However, there are dimensions of exclusion in health that seem to depend on variables that are more characteristic of the health sector, such as the service delivery model; the deficit of adequate

infrastructure to respond to the demand for health; and the assignment of resources within the service network.

- Exclusion due to the low proportion of the population that has access to basic services (sanitation, drinkable water, electricity) indicates that the action of the State is not reaching a great quantity of households in the countries studied.

- Given the dynamic nature of the exclusion in health phenomenon, it is essential to generate the necessary conditions for its characterization to be assumed by the national teams as a periodic task.

## 5.4. IMPORTANT CONCLUSIONS
### FOR POLICY FORMULATION

*The multidimensional character of exclusion in health calls for multi-sectoral policies*

The result of the econometric study reveals two fundamental aspects of the conditions of exclusion in the population classified as excluded from health:

- In the first place, the excluded population faces multiple sources of exclusion in all of the countries studied.

- Secondly, that their degree of exclusion is almost of total exclusion.

In terms of policy actions, these results suggest that the policies aimed at mitigating this situation should not concentrate on a single dimension or factor of exclusion, but should be multi-sectoral and inter-sectoral.

*Major regional variations in exclusion in health require policies of a a territorial nature*

One conclusion that emerges from the study is that both exclusion in health and its underlying conditions present major variations within the countries. It is therefore recommended that within the set of strategies that should be developed to reduce exclusion in health; there must be some with regional character, aimed specifically at extending social protection in health towards the most affected geographical areas.

*The importance of the struggle against poverty*

Poverty is a determinant of exclusion in health in the countries studied, and in all of them it is recognized as one of the most important determinants. Exclusion in health perpetuates poverty. As a result, strategies to fight against poverty are closely related to the struggle against exclusion in health.

*The struggle against exclusion in health is also a fight against ethnic discrimination*

The indigenous population is systematically found in the group of those who are excluded in health, especially the rural indigenous population. Membership in an indigenous population constitutes a risk factor for exclusion in health in at least three countries in the study (Peru, Guatemala and Ecuador).

In the case of Paraguay, the principal risk factor for exclusion in health is of a cultural nature and consists of being monolingual in Guaraní, although this is not considered equivalent to being of indigenous origin in the culture of the country's inhabitants.

In the Dominican Republic, the principal determinant of exclusion in health is to be a Haitian immigrant.

This information reveals the importance of incorporating policies against racial discrimination into the set of strategies to fight against exclusion in health.

*The strategies against exclusion in health should consider Social Security*

The study shows that not having health insurance turns out to be an important barrier of access to health care that is very linked to the labor condition, as in the cases of Paraguay, Peru, and Honduras. This fact poses the need for reviewing the structure of the existing social security regimens in these countries.

## 5.5. Aspects that require additional research

*The gender variable*

Even though significant differentiation in the degree of exclusion in health by gender is not captured with the indicators utilized and the phenomenon of exclusion seems to indiscriminately affect men and women at the level of the analysis carried out, important signs of discrimination exist. There include discrimination against girls in the Peruvian case, discrimination against women heads of household in the Guatemalan case and discrimination against women with regard to waiting periods for care in the Ecuadorian case. These suggest the need for expanding the analysis with more specific indicators and indicators that link age, gender, and exclusion in health.

*The quality of services delivered*

The quality of health services variable does not appear to be associated with exclusion in the countries studied. It is possible that this is due to the fact

that the indicators utilized do not adequately capture this variable or that there is not sufficient information in this regard in the countries studied. The econometric study suggests that perhaps it is ruled out of the index by its association with the rural condition of the housing of the individual. It is necessary to look more closely at this aspect to determine if it contributes to exclusion in health.

### *The ethno-cultural factor*

Even though the study shows an association between exclusion in health and racial/cultural discrimination, it is not clear if this relationship is due mainly to language, the physical attributes of ethnic groups—skin color, features, clothing—the social dynamics within each ethnic group, or their socioeconomic position in the community in which they live. It is necessary to study this relationship in a more specific manner in order to better understand the phenomenon and be able to make policy recommendations in this regard.

## 5.6. A long road lies ahead

We conceive of this study as the beginning of a long road toward achieving the understanding of a complex group of causes and relationships that determine exclusion in health.

As such, the study does not intend to be of a conclusive nature, but instead to share elements that contribute to discussion in this field. We hope to generate debate and interest in exclusion in health as a crucial problem to address in countries and also within international cooperating agencies.

Above all, we hope to contribute to the cause of improving living conditions and promoting the integration into society of the excluded around the world, with equal rights and with respect for their dignity.

# BIBLIOGRAPHIC REFERENCES

Banco Central de Honduras. *"Honduras en Cifras."* 1997/1999, 1999/2001.

Inter American Development Bank. *"Progreso económico y social en América Latina. Informe 1996. Tema Especial: "Cómo organizar con éxito los servicios sociales."* Washington DC, 1996.

Inter American Development Bank. *"Health services in Latin America and Asia."* Chapters Five, Six and Thirteen. Edited by Carlos Gerardo Molina and José Núñez del Arco, 2001.

World Bank-FLACSO. *"Exclusión social y reducción de la pobreza en América Latina y El Caribe."* Edited by Gacitúa, Sojo and Davis, Washington DC, 2000.

Bessis, Sophie. *"De la exclusión social a la cohesión social. Síntesis del Coloquio de Roskilde."* UNESCO. Paris, 1995.

Behrman, Jere; Gaviria, Alejandro; and Székely Miguel. In *"Who's in and who's out. Social exclusion in Latin America."* Inter American Development Bank (IDB), Washington DC, 2003.

Bhalla A. S. and Lapeyre Frederic. *"Poverty and exclusion in a global world."* Macmillan Press Ltd. Great Britain, 1999.

Cámara de Comercio de Quito - Sistema Integrado de Indicadores Sociales del Ecuador (SIISE). *"Informe de sobre el Desarrollo Humano en el Ecuador."* Published by UNDP, 1999.

Censo de Población y Vivienda. Honduras. 2002.

European Comission. *"Towards a Europe of solidarity."* Commission Comunication 542, Brussels, 1992.

ECV. Encuesta de Condiciones de Vida. Instituto Nacional de Estadísticas y Censos de Ecuador. Quito, 1999.

ENCOVI. Encuesta Nacional de Condiciones de Vida. Guatemala, 2000.

ENNIV 2000. Encuesta Nacional de Niveles de Vida. Peru, 2000.

Encuesta Nacional de Niveles de Vida 2000. *"Cuánto."* Lima, 2001.

ENDES 2000. Encuesta Nacional de Demografía y Salud. Peru, 2000.

ENESF. *"Encuesta de Epidemiología y Salud familiar."* Honduras, 1991-1992; 1997; 2001.

Espin- Andersen, G. *"The Three Worlds of Welfare Capitalism."* Princeton University Press, 1990.

Figueroa, Adolfo. *"La exclusión social como una teoría de la distribución."* In "Exclusión social y reducción de la pobreza en América Latina y El Caribe." Edited by Gacitúa, Sojo and Davis. World Bank-FLACSO, 2000.

Foster, J. Greer J. and Thorbecke E. *"A class of the Composable Poverty Mesures."* In Econométrica, Vol. 52, pg. 761-765. 1984.

Grosh, M. and J. Baker. *"Proxy Means Test for Targeting Social Programs. Simulations and Speculations."* In Living Standards Measurement Study, No. 118. Washington DC, 1995.

Hidalgo A., Corugedo I., Del Llano J. *Economía de la Salud.* Ediciones Pirámide. Madrid, Spain, 2000.

INE. Encuesta de Hogares. May 2002.

Jordan, Bill. *"A theory of poverty and social exclusion."* Cambridge, 1996.

Madies, Claudia V; Chiarvetti, Silvia; and Chrony, Marina. *"Aseguramiento y cobertura: dos temas críticos en las reformas del sector de la salud."* In Revista Panamericana de Salud Pública, Vol. 8, Nos. ½, July - August 2000.

Madueño, Miguel. *"Perú: Análisis de Demanda y Servicios de Salud."* Technical document prepared for the Ministry of Health of Peru. (Proyecto 2000-MINSA, 2002).

Ministerio de Salud de Perú. *"Lineamientos de Política Sectorial para el período 2002-2012 y Principios Fundamentales para el Plan Estratégico Sectorial del Quinquenio Agosto 2001 - Julio 2006."* Lima, 2002.

Ministerio de Salud de Perú - Pan American Health Organization (PAHO-MINSA, 1997). *"Equidad en la Atención de Salud, Perú 1997."* Lima, 1999.

Ministerio de Salud Pública, Ministerio de Educación, Ministerio de Bienestar Social (Secretaría Técnica del Frente Social), Ministerio de Vivienda, Ministerio el Trabajo y Recursos Humanos, INFA, CONAMU – Ecuador.

United Nations System in Guatemala. Database from the System *"La fuerza incluyente del desarrollo humano. Informe de Desarrollo Humano."* Table 3.1, Pag. 43, 2000.

International Labor Organization - Pan American Health Organization ILO/ PAHO. *"Panorama de la exclusión de la protección social en salud en América Latina y El Caribe."* ILO/PAHO, Mexico, 1999.

Pan American Health Organization PAHO/WHO. Studies on exclusion in health in Ecuador, Guatemala, Honduras, Paraguay, Peru and the Dominican Republic for the study *"Caracterización de la exclusión en salud en América Latina y el Caribe."* 2001-2003.

Pan American Health Organization PAHO/WHO. *"Situación de salud en las Américas. Indicadores Básicos 2001."* Special program for health analysis. PAHO/WHO

Pan American Health Organization PAHO/WHO/HPS. "Guía Metodológica para la caracterización de la exclusión social en salud." PAHO-WHO/HSP, 2001.

Pan American Health Organization PAHO-MINSA. Perú: *Cuentas Nacionales en Salud* 1995-2000. Lima, 2003.

Pan American Health Organization PAHO. *"Gasto Nacional de Salud en las Américas: Situación Actual y Tendencias."* Working Document. Políticas Públicas y de Salud, Division of Health and Human Development. Pan American Health Organization. Washington, February 2002.

Pan American Health Organization PAHO-MINSA. *"Proyecciones de Financiamiento de la Atención de Salud 2002-2006."* Lima, 2002.

Banco Central de República Dominicana. *"Cuentas Nacionales de Salud de República Dominicana."* Prepared with the support of the Pan American Health Organization PAHO-WHO; USAID-PHR; United Nations Development Program. 1996.

Robles, M. "Informe de Consultoría para el Programa MECOVI." Project developed per order of the INEI. Manuscript. Lima, September 1998.

Rosenberg, H.; and Andersson, B. "Repensar la protección social en salud en América Latina y el Caribe," in Revista Panamericana de Salud Pública, Vol. 8, Nos. ½, July - August 2000.

SECPLAN. *"Proyecciones de Población sobre la base del censo de 1988."* Honduras, 1988.

Secretaría de Finanzas - Honduras. *"Memoria 2001."* 2001.

Secretaria de la Presidencia - Honduras. *"Estudio sobre el Gasto en Servicios Sociales Básicos."* 1999.

Secretaría de Salud-Honduras. *"Investigación de mortalidad en mujeres en edad reproductiva."* Honduras, 1990 and 1997.

SESPAS-PAHO. *"Evaluación del Proceso de Reforma y Perfil de Servicios de Salud."* Dominican Republic, 2001.

Sen, Amartya. *"Development as freedom."* USA, 1999.

Silver, Hillary. *"Three paradigms of social exclusion."* In Rodgers et al. (eds), "Social Exclusion: Rhetoric, Reality, Responses." International Institute for Labour Studies. Geneva, 1995.

United Nations System in Guatemala. *"La fuerza incluyente del desarrollo humano. Informe de Desarrollo Humano 2000."* Table 3.1, pg. 43, 2000.

Spicker, P. "Exclusion." In Journal of Common Market Studies, Vol. 35, Number 1, 1997.

Text about the creation of the Social Exclusion Unit by the English Prime Minister, on the British

Government's web page on social exclusion.

United Nations Development Programme – UNDP. *"Human Development Report."* 2001. Oxford University Press. Tables 1 (pg. 145) and 3 (pg. 155), 2001.

Vergara, Carlos. *"El contexto de la reformas del sector salud."* In Revista Panamericana de Salud Pública, Vol. 8, Nos. ½, July - August 2000.

Wastgaff, A. *"Poverty and health sector inequalities."* In Bulletin of the World Health Organization 2002;80:97-105.

Whitehead, M. *"The concepts and principles of equity and health."* In International Journal of Health Services, 1992; 22:429-45.

# LIMITATIONS OF THE INDEPENDENT ANALYSIS OF THE INDICATORS

The techniques are limited to independently identifying the excluded population (*head count*) in each one of the dimensions of analysis and sources of exclusion that are proposed. They present some limitations, among which the principal that can be mentioned are the following:

a.  It does not fulfill the property of **monotonicity** or discontinuity, which is important in order to analyze the temporary evolution of the exclusion indicator. In accordance with this property, favorable or unfavorable changes in the conditions of access or of the provision of infrastructure or human capital should be reflected in an improvement or deterioration, respectively, in the exclusion indicator. This is not necessarily fulfilled since the *head count,* given that it is a discrete variable, creates an abstraction of the differences in the degree of exclusion of the population. As a result, any change that is produced in some source of exclusion (for example, reduction of extreme poverty), could only be reflected in a restoration within the population that is classified as excluded, without affecting the global exclusion indicator.

b.  The *head count* does not fulfill the property of **reflexivity**, which is relevant in order to perform comparisons of the exclusion conditions between different geographical areas. In accordance with this property, that country which shows a better distribution in access conditions, for example, should be the one that registers the lowest degree of exclusion. Thus, 61% of the population of Ecuador is poor, while in Honduras this percentage is 63%. In accordance with these results, it could be inferred that the exclusion conditions of an economic nature are similar in both countries; however, analyzing the distribution of the poor population, it is observed that in Ecuador, 21% of the population is in a state of extreme poverty, versus a reported 47% in Honduras. Accordingly, in the aggregate, the degree of exclusion from health services based on an economic standpoint would be smaller in

Ecuador, which is contradictory to the result that would be obtained by only considering the *head-count* in the analysis. This is due to the fact that the *head-count* does not take into account differences in the degree or intensity of the exclusion in individuals and as a consequence of this, its results are not conclusive enough to carry out intra- and interregional comparisons. This prevents the identification of priority areas and the definition of efficient criteria for the assignment of financial resources to implement the ESPH at the departmental level.

c.  It does not fulfill the property of ***monotonicity of subgroups*** or of ***additive decomposition.*** The first refers to that if the degree of exclusion of a subgroup population varies, ceteris paribus, the global indicator should vary in the same direction. In addition, the second property refers to how the global exclusion indicator can be expressed as:

- · The weighted average of the indicator of exclusion for each population segment; and
- · The weighted average of the different dimensions and sources that would explain social exclusion in a country.

This is important, inasmuch as it makes possible the identification of the relative contribution of each exclusion factor to the individual risk of exclusion, which is fundamental in order to prioritize and guide the strategies for expanded protection that are to be implemented.

In order to correct the indicated measurement biases, a methodology for the comprehensive measurement of the excluded population based on the construction of a ***composite index of exclusion*** is proposed.

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# COMPOSITE INDEX OF EXCLUSION

The evaluation of exclusion using the calculation of a continuous exclusion indicator based on the family of measures proposed by Foster, Greer, and Thorbecke (FGT), (1984), which incorporates the following elements of analysis, is proposed:

1. **Incidence of exclusion:** How much of the population is found to be excluded?

2. **Intensity of exclusion:** What is the degree of exclusion in the population reported as excluded? What is the gap between the current level and the level of total satisfaction?

3. **Severity of exclusion:** What is the degree of inequality among the levels of exclusion in the population?

$$I_\alpha^q = (1/n) \, \Sigma_{i=1} \, ((S^* - S_i)/S^*)^\alpha$$

Formally, the family of dissatisfaction measures FGT is devised as:

Where: $I_\alpha$ = global index of exclusion
$N$ = total population
$S_i$ = level of exclusion of the individual i
$S^*$ = optimal level of inclusion
$Q$ = total population reported as excluded
$\alpha$ = coefficient of aversion to exclusion ($\alpha >= 0$)

If $\alpha = 0$, then the index of dissatisfaction is reduced to:

$$I_{\alpha=0} = q / n = H$$

Where H is the *head-count* ratio, which is the percentage of population classified as excluded. As was previously exposed, since this indicator is discontinuous, it is insensitive to the degree of exclusion of the users, which limits its use for the analysis of the policy impact of the extension of social protection in health (ESPH).

On the contrary, if $\alpha = 1$, the global index of exclusion would be expressed in the following way:

$$I_{\alpha=1} = (1/n) \, \Sigma_{i=1}^q \, ((S^* - S_i)/S^*) = H^*B$$

Where B represents the average exclusion gap of a country's population and is measured by:

$$B = (1/q)\ \Sigma^{q}_{i=1}\ ((\ S^* - S_i)/S^*)$$

In this scenario, the global index reflects both the incidence of exclusion (given by H) and the intensity of exclusion (represented by B) and can be interpreted as the **_potential effort required to eliminate exclusion through ESPH programs_**. Nevertheless, this type of indicator is non-sensitive to the distribution of the degree of exclusion: an improvement in the exclusion conditions of the excluded population can leave the indicator H*B invariable. In order for this effect to be captured by the index, greater consideration needs to be assigned to the distributive variable of the unsatisfied users through values greater than a (>1). In the specific case that $\alpha = 2$, it is given that:

$$I_{\alpha=2} = H^*(B^2 + (1\text{-}B)^{2*}\sigma^2)$$

Where "s" represents the variability coefficient of the degree of exclusion in the excluded population. In accordance with this expression, changes in the degree of exclusion are attributable to two sources: (a) the exclusion gap and (b) inequality in the degree of exclusion.

Since all measures of the FGT express the exclusion gap as a percentage of the optimal level of inclusion, all of them are found in the range from 0 to 1, with values close to 0 representing a lesser degree of exclusion and those close to 1 a greater degree of exclusion. In accordance with increases, the FGT tend to diminish, thus: $I_{\alpha\text{-}1} > I_{\alpha}$.

A special characteristic of the FGT measures is that they are additive dissagregables. Thus, global exclusion in a country can be expressed as the weighted average of the levels of exclusion of different population segments. Accordingly, the index of exclusion can be expressed as:

$$I_{\alpha} = \Sigma_{j=1}\ (n^{m}_{j}/n)\ I_{\alpha j}$$

Where $I_{\alpha}$ = index of global exclusion
$I_{\alpha j}$ = index of exclusion for group j
$n_j$ = number of individuals belonging to subgroup j
n = total population
m = total number of population segments.

# METHODOLOGICAL ASPECTS OF THE CALCULATION OF THE INDEX OF EXCLUSION (FGT2)

In order to estimate the index of exclusion for the sample of four Latin American countries (Ecuador, Honduras, Paraguay and Peru), an aversion coefficient (a) equal to 2 was considered. The four components that devise the global index were calculated for each country: (a) the *head-count*, which refers to the percentage of the population that is excluded; (b) the exclusion gap for each of the dimensions and sources of exclusion; (c) the weights of each one of the dimensions of the analysis; and (d) the coefficient of variability for the degree of exclusion.

In regard to the estimate of the **head-count**, this was projected using the methodology proposed by the Pan American Health Organization (PAHO). That is, a partial *head count* was calculated for each indicator that was selected as representative of the dimensions and sources of exclusion expressed in the PAHO methodological guide. The relationship of the indicators and the classification criteria for the excluded population utilized in the sample of selected countries are reported in table I. The **exclusion gap** measures the distance from the level of exclusion (S) of an individual to the optimal level, which refers to a situation of non-exclusion (S *), for which it is required that the levels or degrees of exclusion be expressed in cardinal values. How is it possible to reconcile these requirements with the type of information provided by the surveys for each indicator that represents the sources of exclusion, which are reported as qualitative values? In order to solve this problem, the methodology of the **calculation of the gap based on optimal scaling** [Grosh, M. and J. Baker (1995), Oaks, M. (1998)] will be utilized.

This methodology approximates the average exclusion gap of a country (B) beginning with: (1) a weighted average of the partial exclusion gaps for each one

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[53] The formalization of the transformation method is developed based on optimal scales.

of the dimensions and sources of exclusion; and (2) the transformation of every possible qualitative response that the individual reports into a cardinal value ($S_i$), with the transformed value for the better qualification response corresponding to that for non-exclusion ($S^*_i$).

For the estimation of the weights and the transformation of the categorical scales into numerical scales, the algorithms of Principal Components and Optimal Scaling were applied, respectively. It is noteworthy that both sets of parameters were estimated in an integrated way utilizing the Alternating Least Squares Method. The advantage of introducing a metric to the nominal variables is that this makes it possible to give every category a differentiated value according to its contribution at the level of individual exclusion.

*The method of principal components,* which is a special case in terms of methods of factor analysis, has as a purpose the construction, based on the linear combination of a set of variables $Z_i$ ($i = 1,2,....k$), of new variables $P_i$ known as principal components, $P_i = \Sigma_{i=1} a_i Z_i$.

Where $a_i$ are its respective weights or considerations. The number of principal components will define the dimensions or degree of independence that exists between the set of k variables Z. To be able to calculate the principal components, $a_i$ should be estimated subject to two restrictions: (1) that the principal components are found to be uncorrelated (principle of orthogonality) and (2) that the first principal component absorbs and accumulates the greatest variability of information and so on.

Transferring this methodology to the field of the measurement of risk of exclusion in health, the first principal component $P_i$ is equivalent to an index of risk, extracted from a function of non-observable risk. Based on two data sets: household socioeconomic information and information about the structure and productive processes of health services, both representative of the dimensions and sources of exclusion, $P_i$ provides a more parsimonious representation of the data and helps explain the greatest source of variation in the system. Thus, in this paper the Principal Components Model was applied, truncating the solution of the model to a single principal component. This is done in this way since the first component, obtained based on a linear combination of the group of referential indicators for the sources of exclusion, is the one which absorbs and accumulates the maximum variability of the information and which makes it possible to obtain the best representation of the risk function of individuals or households that leads to an arrangement (ranking) of households according to the value obtained from P.

In addition, the application of the algorithms based on Optimal Scaling and Alternating Least Squares *carries out nonlinear transformations of the set of qualitative or categorical variables*, with the objective of maximizing the goodness-of-fit of the models that are proposed in point (c). The basic principle of the EA-MCA is to divide the set of parameters into two mutually exclusive and exhaustive subsets: (1) the first one contains the parameters of the model (weights); and (2) the second, the parameters of the data or categories (parameters of optimal scale).

The process of optimization is developed based on conditional estimates of the parameters, that is, through the calculation of the minimum quadratic estimators of a subset of parameters and maintaining the parameters of the other subset as fixed. When the conditional estimators are found, the former estimators are replaced with the new values. The process continues to calculate the conditional estimators for the following subset of parameters and thus, successively, the estimates are being alternated: first, those from the parameters of the model and then those from the parameters of the data, until the results converge.

# DESCOMPOSITION OF THE INDEX OF EXCLUSION

| Variable | Relative weight in the index of exclusion | | | |
|---|---|---|---|---|
| | Ecuador | Honduras | Paraguay | Peru |
| Poverty | 23% | 2% | 4% | 13% |
| Health insurance | n.a. | 17% | 4% | 3% |
| Geographical area | n.a. | 11% | 2% | 16% |
| EAP | n.a. | 3% | 13% | 2% |
| Ethnic discrimination | 7% | n.a. | 8% | 7% |
| Gender | n.v. | n.v. | n.v. | n.v. |
| Water supply | 11% | 3% | 9% | 5% |
| Sanitation services | n.a. | 4% | 3% | 3% |
| Electricity | n.a. | 5% | 11% | 5% |
| Availability of level III public establishments | 21% | n.a. | n.a. | 6% |
| Physicians per 1,000 inhabitants | 13% | 25% | 5% | 7% |
| Beds per 1,000 inhabitants | 7% | 4% | 14% | 5% |
| Non-institutional births | n.a. | 19% | 14% | 15% |
| Pregnancy check-ups below the standard | n.a. | 7% | 14% | 13% |
| Abandonment of immunizations | 18% | n.a. | n.a. | n.v. |
| Quality | n.a. | n.a. | n.a. | n.v. |
| *Total* | *100%* | *100%* | *100%* | *100%* |
| **Summary:** | | | | |
| *Entry barriers* | *41%* | *45%* | *53%* | *54%* |
| Economic | 23% | 20% | 8% | 16% |
| Geographical | n.a. | 11% | 2% | 16% |
| Work-related | n.a. | 3% | 13% | 2% |
| Ethnic | 7% | n.a. | 8% | 7% |
| Supply of public services | 11% | 12% | 23% | 14% |
| *Internal to the health system* | *59%* | *55%* | *47%* | *46%* |
| Structure | 41% | 29% | 19% | 19% |
| Supply of services | 18% | 26% | 28% | 27% |

*Note: n.a. = not available; n.v. = not valid.*