Dimensions of Exclusion from Social Protection in Health in Latin America and the Caribbean[1]

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Summary. In spite of legislation establishing health as a universal right, exclusion form social protection in health remains a major problem in the Americas. Structural characteristics of the systems contribute to the situation. Measuring the phenomenon is a challenge due to its multi- causal nature. To asses its importance several indicators are developed, which show that at last 20% of the population (or above 82 million people) are excluded, although specific studies will be needed in each country. Those counties with a unified National Health Insurance system have lower levels of exclusion than those with fragmented systems. The indicators presented are deemed best approximations, although some are rejected due to distributional considerations within the countries. Indicators are based on structure, access, process and coverage. Further research is expected at the country level for policy intervention

Latin America and Caribbean (LAC) countries have declared directly or indirectly that health is a fundamental right of all their inhabitants.[2] Furthermore many explicitly acknowledge that Health is a Universal Human right. However, a review of available evidence shows that a major gap exists between that right and effective coverage, and that over 20% of the population in reality do not have access to services.

1. Social Protection in Health and Exclusion[3]

In the modern conception of the role of the Government it is understood that Society has the duty to provide health protection to all its inhabitants. This is called Social Protection in Health (SPH). The concept has evolved from an original belief that health was the individual's responsibility, then the community's, and as of the end of the XIX century, the responsibility of the State. Around the mid XX century this was interpreted as the actual provision of services by the State. Whereas some societies still hold that view, SPH has evolved to include also - or alternatively - the guarantee of services provided by anyone in the community. Thus both some type of insurance that allows the purchase of services or the actual provision are included under SPH. Those not covered are called "excluded" and the process "exclusion"[4]. There are several explanations why this gap in coverage exists in spite of the avowed intentions of the Countries.

Exclusion is the phenomenon of leaving people out of a social endeavor, in this case health care[5]. Exclusion in LAC is a major problem, as we shall see. Its causes are many, and of different nature; thus its analysis requires a multidisciplinary approach. There is no unique way to consider it or analyze the pertinent data.

The relation between poverty and exclusion in particular deserves a clarification. There is a clear association between these two concepts, but they are not synonyms. There are poor people with access, and there are not so poor people who are excluded, for example due to lack of access to services for geographical reasons.

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This paper will attempt to present the dimensions of exclusion of SPH and the mechanisms needed for its measurement. This is done by taking a picture of the situation at the end of the XX century using the best available and comparable data in the Americas. This way we hope to facilitate the social dialogue in the preparation of sectoral policies to improve SPH.

The analysis is limited to access. In other words those that have no access to services are considered excluded here. Clearly access to services by itself does not guarantee true protection or quality care, arguably also an exclusion consideration. However data around that subject is still being developed and hence beyond the reach of this paper. Therefore, the estimation of exclusion that follows underestimates the true nature of the phenomenon.

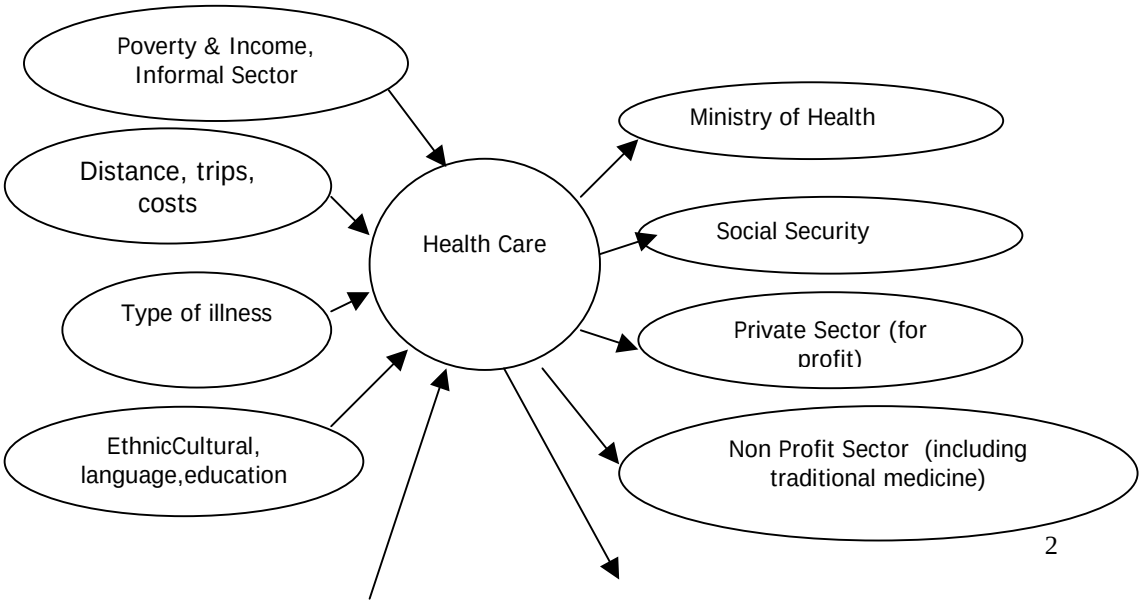
Coverage, access and exclusion are briefly defined, followed by a short review of the structure of the health sector and its implications for exclusion. Then the dimensions of exclusion are estimated, and we finally consider some consequences of exclusion.

2. Coverage, Access and Exclusion.

Coverage in health describes the proportion of the population having health protection, in other words, those that have some measure of access to health services.

In order to estimate levels of exclusion the distinction between theoretical and actual coverage is also useful. Theoretical coverage includes those that are legally covered, that is, those that are explicitly included as covered by the relevant legislation, and also those that are counted in country statistics. For example, in many countries of LAC workers, but not their families, may be statutorily covered by Social Security. The theoretical coverage would include all workers. In some cases also their families. Actual coverage considers only those that have effective reach of health services[6]. In the case mentioned, coverage may not be effective because both worker and employer "save" by the worker receiving a higher net wage and the employer avoiding its contribution altogether.

Access to health services refers to the capacity of effective use of said services by the population as well as the ease with which they can be reached. Several factors contribute to the level of real access or use of health services and care and hence to explain exclusion. The principal are economic and financial factors, place of residence, difficulty of displacement to the place of provision of services, self perception of the seriousness of the illness suffered, education, language barriers, and perception of quality of care. As the following figure shows, the interaction of these factors explains most of the exclusion. Conversely, they also help to explain the choice by the user –if possible under his/her specific conditions- among using a "regular" health provider, self-medication or a non-conventional services such as traditional medicine.



3. The Health Sector Structure: Integration among Sub-sectors, Coverage and Exclusion.[7]

Institutionally the Health Sector can be divided into three main components in Latin America: the public sub-sector (PS), Social Security (SS)[8] and the private sub-sector. The latter can be divided into for profit (FP) and voluntary/community (PV). The last will be also called "non-conventional" while the other three are called "conventional". This division helps to understand and quantify coverage and exclusion in most countries.

It should be noted at the outset that LAC countries can be divided into two major groups of countries, based on their health care system scheme:

1) Those with health care services designed under the influence of the Beveridge model, or some variation of National Health Services (NHS). This scheme is a highly centralized system where all citizens have access to health care. The services are exclusively financed from taxes. Countries that have a NHS are Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Granada, Guyana, Jamaica, Saint Kits and Nevis, Sta. Lucia, Saint Vincent, Suriname and Trinidad y Tobago. Most of these countries have little or no exclusion at all of healthcare. In addition, most of them are small countries, thus generating little exclusion based on geographic inaccessibility. In these cases exclusion exists, but cannot be attributed to the structure of the health sector.

2) Those who have followed the Bismarck model of social insurance. These are countries with very fragmented systems with a coexistence of a SS based on compulsory insurance of the formal workers, a private sector for those who can afford it and a PS for everybody else. Countries whose health care services were designed on social insurance are: Argentina, Bolivia, Brazil, Colombia[ii], Costa Rica, Chile, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Uruguay, Venezuela. Some of these have started to unify their systems lately (i.e. Costa Rica).

3.1 The Public Sub-sector. This sub-sector can include the national, sub-national (province or state) and local (municipal) levels. The main institution is the Ministry of Health, which normally handles health promotion, sanitation and curative health. In general it provides services through health workers who are public employees. It is funded through taxes, both local and national. In principle is the universal health service provider. In practice is the provider of last resort, utilized generally by the poorest strata of the population. Supply of services depends on governmental policies and the consequent allocation of public budgets and expenditures. Although it was designed for free service provision, lack of enough resources as well as the need to deter moral hazard (abuse) have resulted in a tendency to charge co-payments. Exclusion from this sub-sector is related mainly to non-availability of services (resolutive capacity) and difficulties of geographical access, in the sense of both existence and affordability of transportation. In addition, ethno-cultural considerations as well as perceptions of dehumanized treatment by health workers also influence people's decision not to use its facilities.

There are no firm assessments of the PS coverage in most countries. It is usually estimated by subtracting the estimated SS, and private insurance coverage from the total population. In some countries where this estimation is available, the sanitary authorities have conceded that PS coverage amount to 30-40% of the population. Considering that the SS and private insurance

coverage in these countries is usually between 10 and 30% implies that somewhere between 30 and 50% of the population may have no coverage. These countries have highly segmented systems generally and a low coverage of the SS.

Table 1 shows the data available in four countries in 1997[9]. In the Dominican Republic it was estimated that about 24% of the population had insurance (social or private) and that the PS coverage was about 45% of the population. The next 31% was "covered" by NGO's, private providers and informal medicine (shaman, informal dispensaries and self-medication) or have no coverage at all. In Ecuador, 21% of the population has insurance, while the PS covers 30%. In Guatemala, PS covers 30% of the population, 26% is insured and 42% of the population has no insured coverage. Finally, in Paraguay 30% of the population has no access to regular services. Although approximation only, these figures clearly show the magnitude of exclusion.

Table 1. Estimation of Insured Population in Selected Countries

	Social and private insurance	PS
Dominican Republic	24	45
Ecuador	21	30
Guatemala	26	30
Paraguay	30	30

3.2. Social Security. This sub-sector was conceived from the outset as a way to protect the worker in the formal employment sector. It has been extended in some cases to include dependent family members. It usually includes one or more type of coverage paid through a premium (contribution) by the worker, which is normally complemented by the employer and/or the state. The SS system normally covers private as well as public sector workers. Many times parallel SS schemes coexist that cover different segments of the working force (i.e. public sector). Excluded from the SS are those not contributing, i.e. informal sector workers, poorer strata of the population, women head of household, single women out of formal employment, and, many times, the elderly. Quality is perceived higher than quality in the PS. Excluded groups from the SS are forced to utilize the PS or the private sector.

In some countries of Latin America such as Chile, Brazil, Costa Rica, Argentina, Uruguay, Panama and Colombia SS coverage (in the sense of systems funded through labor taxes) exceeds PS coverage.

Some population excluded from the SS may have access to services in the other sub-sectors, either private (those that can afford it) or PS as mentioned above.

3.3. Private Sub-sector. This sub-sector includes private insurers, prepayment institutions and providers for profit or non-profit. (Doctors, private clinics, etc). Insurance schemes are funded through premiums, which in some cases may be mandatory for workers and/or employers. Prepayment institutions are funded through premiums and additional co-payments, which are meant to reduce moral hazard problems. Private providers (not associated with insurance) are funded through per service payments privately. These are called "pure out of pocket payments" or "direct payments" which fund 100% of the fee at time of delivery.

Exclusion results usually from the high level of premiums or per service fees. In addition the systems may establish conditions or requirements that restrict access for reasons such as age, pre-existing health conditions, waiting periods and others. Furthermore, some occurrences may not be covered such as catastrophic risks. Exclusion may result from either of the above or a combination therefrom.

3.4. The **non-conventional sub-sector** has emerged usually as a consequence of the deficiencies perceived from, or the lack of access to, the conventional subsystems.[10] It is generally funded from out of pocket contributions and/or subsidies (coming from taxes) of the different levels of public authorities. Several non-conventional systems may -and usually do- coexist.

Coverage by private insurers and the non-conventional sector has been estimated at 5 to 25% of the population, many times overlapping SS or PS to increase benefits or simply supply services perceived as ineffectual.

Coverage by non-insured private providers is very difficult to estimate, especially as the population uses these services for specific occurrences of illness.

Sub-sectors usually purchase services from each other. For example, where there are only public service providers, a SS may refund the PS for services rendered to their covered population.

3.5. Sub-sectors and implications for exclusion. In most non-integrated LAC countries, coexistence of the sub-sectors has been the norm, usually without suitable regulations and without a clear sense of purpose. It should be noted that in the LAC context coexistence is not related to competition or freedom of choice from the user's viewpoint. Generally the user is stuck: as a formal worker s/he will participate in some variation of the SS scheme with little choice possibilities. Except for those that can afford the cost -and use the FP providers- virtually everybody else will use PS or the PV. If even this is not possible (or culturally desirable) they will use traditional medicine, pharmacies or simply remain totally excluded.

A first link between sub-sector segmentation and exclusion[11] is the loss of economies of scale both in costs as well as in risk pooling. Except for the very large countries such as Brazil or Mexico, the profusion of institutions providing the same type of service results in overly high levels of overhead or bad resource allocation due to duplication of investments. From this point of view smaller pools increase the probability of bankruptcy if one or a few expensive cases occur, forcing higher premiums or financial unsustainability.

A second consideration is the traditional vertical integration within each sub-sectors or its members (which may be several in the SS and private sub-sectors). Each takes care of the financing, insurance and provision functions, but with little interaction with each other, except for acquiring services when none is available from their own subsystem. This occurs mainly from the private and SS towards PS services and very seldom the other way around. This lack of arms length relationship results in inefficient use of resources and services as there is neither a market nor a regulatory mechanism questioning specific decisions.

In countries with a unique network or highly integrated sector (i.e. Costa Rica, Cuba, and the English speaking Caribbean countries), most of the population is covered and absolute exclusion is very low. Conversely, where segmentation is high, people with fewer resources tend to end up in the PS, which is under-funded and is perceived as lower quality. Exclusion is higher in these cases.

4. Dimensions of exclusion[12].

A multi pronged approach to obtain a snapshot of the situation, as of end 1999, using the best available information for all countries was attempted to asses the actual level of exclusion based on all the above considerations.

Exclusion measurements can be attempted from a theoretical (Who is not included by definition?) or actual (Who does not have access to services even though in principle could?) point of view. Both approximations are considered below[13].

The indicators can be based on criteria that can be either **external or internal** to the health sector in that the underlying causality lays within or without it. Among external indicators access to the SS, poverty, geographic access and ethno-cultural are included. Internal indicators are those related to the care process. We shall consider institutional births, follow up vaccination, doctors per capita and access to water and sanitation.

The measurement can be made in absolute number or as a proportion of the population. It is no surprise that the number of excluded in a country like Brazil or Mexico is far higher than, for example, that of Honduras. In terms of reduction of the number of excluded in the continent effective action in the former would have a high impact. But if the excluded constitute a high proportion of the population for a given country it may be harder to tackle the problem from the public policy point of view (as would be the case of Haiti). Therefore we need both measures.

Finally as the indicators do not measure exactly the same things, what is important is the ranking they produce. Obviously a country that is high in several of the rankings, and both in absolute and relatively terms is a prime candidate for intervention. But the exact measure of the actual size of its problem will require the specific analysis of the country.

4.1 Exclusion in relation to coverage by SS[14]. Since all countries state that health is a universal right in their basic or "higher" documents, it is necessary to go one level "lower" to see if there are theoretical exclusions. In countries where the SS is the best reasonable social service, the most obvious theoretical indicator of exclusion refers to those that are not covered by the SS. SS data show that statistical levels of coverage leave out some **218 million people (or 46% of the LAC population).** The following tables shows the ranking of the 10 countries with the highest level of absolute and relative exclusion form this point of view, as well as the 10 countries where SS coverage is not a good explanation for exclusion.

The SS coverage problem is more serious in some countries than in others: in Haiti 99% of the population is not covered by SS; in the Dominican Republic the figure is 93%. In El Salvador and Honduras 86%, in Guatemala 84%, Nicaragua 82%, and in Bolivia Ecuador and Paraguay 81%.

Absolute numbers

As expected the largest and most populated countries are the ones that contribute the most to the inequality in access to SS health care in the in LAC region: Mexico, Brazil and Colombia add up to more than 100 million people excluded from SS health care services. It should be noted that Colombia data is previous to the reforms of law 100. As a result of this law dependants were included, and coverage and ranking went up considerably. The data was kept for comparison purposes. Large countries with less population like Argentina, Peru and Venezuela contribute with some 45 million and smaller countries in the Caribbean and Central America sub-region contribute at a lesser extent in absolute numbers.

Relative numbers

The countries with the higher rates of exclusion of SS services are: Haiti, Colombia, Dominican Republic, Nicaragua, El Salvador, Honduras, Paraguay, Bolivia, Ecuador, and Guatemala; eight of which are within the Central America and Caribbean (not English speaking) sub-region. All the countries, except Guatemala (79%), present rates of over 80% of people excluded of SS services exposing their high incidence of formal unemployment.

Ecuador, Guatemala, Haiti and Dominican Republic rank amongst the ten countries with the highest levels of exclusion of SS health care, both in absolute and relative numbers. As explained above, countries with national health systems or insurance will show no exclusion from SS services.

Table 2

SOCIAL SECURITY

Ten countries with highest exclusion resulting from SS services membership

Absolute numbers		**Relative Numbers**
1 Mexico	1	Haiti
2 Colombia	2	Colombia
3 Brazil	3	Dominican Republic
4 Peru	4	Nicaragua
Argentina	5	El Salvador
Venezuela	6	Honduras
Ecuador	7	Paraguay
Guatemala	8	Bolivia
Haiti	9	Ecuador
Dominican Republic	10	Guatemala

Countries where exclusion of SS services is not a good indicator to measure exclusion of health care

Belize
Cuba
Antigua y Barbuda
Bahamas
Barbados
Dominica
Granada
Guyana
Jamaica
Saint Kitts & Nevis
S. Vincent & The Grenadines
Santa Lucia
Suriname
Trinidad y Tobago

4.2 Gaps in access. This approximation to exclusion is based on measuring certain gaps of access, through the level of poverty, geographical restrictions, and ethno-cultural background.

4.2.1 Poverty. The first gap considered as a proxy for exclusion is poverty. It measures the number of people below what ECLAC (Economic Commission for Latin America and the Caribbean) considers the income minimum necessary to survive in a given country[15]. The absolute deficiency of resources results in a lack of purchasing power that precludes the satisfaction of minimum basic needs, among them health care. It is reasonable to assume that an important proportion of those below this poverty line, but not all, is part of the excluded.

It is estimated that the number of people below the basic line of poverty in Latin America and the Caribbean is **121 million people (25% of LAC population)**. The greatest percentages of people below the poverty line are in Haiti (65%), Guatemala (58%), Bolivia (57%), Honduras (53%), and Nicaragua (50%).

Absolute numbers

Again the figures show that the two most populated countries in LAC, Mexico and Brazil, are the ones with the highest number of people living under the line of poverty, adding up to more than 55 million people. Less populated countries such as Argentina, Peru, Colombia, Venezuela, Guatemala, Haiti, Bolivia and Ecuador show significantly fewer people living under the line of poverty.

Relative numbers

The countries with the highest rate of poor people are Haiti, Guatemala, Bolivia, Honduras, Nicaragua, Guyana, El Salvador, Belize, Ecuador and Mexico. The first five show rates of over 50% of the population living under the line of poverty.

Haiti, Guatemala, Bolivia, Ecuador and Mexico rank high for both absolute and relative numbers of people living under the line of poverty. These are the five countries with the lowest access to health care on the basis of purchasing power.

Mexico has the highest number of poor people in absolute numbers and ranks 10th in relative numbers with 33% of Mexicans living under the line of poverty. Though Brazil ranks second in absolute numbers these figures only claim 17% of the Brazilian population.

Cuba and some English speaking Caribbean countries have the lowest number of people living under the line of poverty.

Table 3.

POPULATION LIVING UNDER THE LINE OF POVERTY

Ten countries with Highest population living under the line of poverty

Absolute numbers		**Relative Numbers**
Mexico	1	Haiti
Brazil	2	Guatemala
Argentina	3	Bolivia
Peru	4	Honduras
Colombia	5	Nicaragua
Venezuela	6	Guyana
Guatemala	7	El Salvador
Haiti	8	Belize
Bolivia	9	Ecuador
Ecuador	10	Mexico

Countries where poverty is not a good indicator to measure exclusion of health care

Dominica
Santa Lucia
Granada
S. Vincent & the Grenadines
Saint Kitts & Nevis
Antigua y Barbuda
Barbados
Suriname
Cuba

4.2.2 Geographical access[16]. The second gap measures the number of people who could in principle access the services, but in practice are too isolated or simply do not have services in their community. These have been estimated at **107 million people, approximately 22%** of the LAC population.

Absolute numbers

As in the previous indicators, larger countries like Brazil, Peru, Argentina, Colombia and Mexico suffer more from lower access to health care on grounds of geographic factors. However, Guatemala, El Salvador and Haiti are small countries that rank amongst the first ten with the higher number of people lacking access to health care services due to geographic inaccessibility.

Relative numbers

The countries with the highest geographical access problems are El Salvador, Peru, Haiti, Guatemala, Bolivia, Honduras, Panama, Argentina, Brazil and Dominican Republic. The first seven show rates of 30% or above of population that suffer from lower access to health care because of geographical factors.

Peru, Haiti, Guatemala, Bolivia, Argentina and Brazil are the countries that rank high for both absolute and relative numbers of people living without geographic access to health care.

English speaking Caribbean countries, Cuba and other islands show no exclusion from health services on grounds of geographic inaccessibility.

Table 4.

POPULATION WITHOUT ACCESS TO HEALTH SERVICES DUE TO GEOGRAPHIC INACCESSIBILITY

Ten countries with the highest exclusion

Absolute numbers		Relative Numbers
Brazil	1	El Salvador
Paraguay	2	Peru
Peru	3	Haiti
Argentina	4	Guatemala
Colombia	5	Bolivia
Mexico	6	Honduras
Guatemala	7	Panama
Venezuela	8	Argentina
El Salvador	9	Brazil
Haiti	10	Dominican Republic

Countries where geographic inaccessibility is not a good indicator to measure exclusion of health care

Belize
Antigua y Barbuda
Bahamas
Barbados
Dominica
Granada
Guyana
Saint Kitts & Nevis
S. Vincent & Grenadines
Santa Lucia
Suriname
Cuba

4.2.3 Ethno-cultural. The final gap considered is ethno-cultural. Certain groups, mainly of indigenous ethnic origin (although there is evidence that there also exists a gender problem[17]), do not use the services as a result of the perception that the health workers will not respect their customs. This may stem either from a real or a perceived level of abuse by health workers, or from their preference to utilize their traditional systems of medicine. The level of exclusion by this concept has not been measured with precision yet. However a good proxy is the number of the indigenous population of Latin America living in communities, which in 1992 was around **43 million people (10.6 % of LAC total population).**

Absolute numbers

The ten countries with the highest levels of indigenous population are Mexico, Peru, Colombia, Guatemala, Bolivia, Ecuador, Chile, Honduras and Venezuela. But the difference between Mexico and Ecuador is 3 to 1. Ethnic population in the Caribbean countries is not meaningful.

Relative numbers

The countries with the higher rate of indigenous population are Bolivia, Guatemala, Peru Ecuador, Belize, Mexico, Honduras, Suriname, Chile and El Salvador. Bolivia and Guatemala have more than 50% ethnic population.

Bolivia, Guatemala, Peru, Ecuador, and Mexico rank high for both absolute and relative numbers of indigenous population.

Large countries such as Brazil, Argentina and Venezuela as well as the English speaking Caribbean countries and Cuba show no exclusion from health services on the grounds of percentage of ethnic population.

Table 5.

NUMBER OF INDIGENOUS PEOPLE

Ten countries with highest number of indigenous people

Absolute numbers		**Relative Numbers**
Mexico	1	Bolivia
Peru	2	Guatemala
Colombia	3	Peru
Guatemala	4	Ecuador
Bolivia	5	Belize
Ecuador	6	Mexico
Chile	7	Honduras
Honduras	8	Suriname
Venezuela	9	Chile
El Salvador	10	El Salvador

Countries where ethnic data are not a good indicator to measure exclusion of health care

Antigua & Barbuda
Bahamas
Barbados
Dominica
Granada
Jamaica
Saint Kitts & Nevis
S. Vincent & Grenadines
Santa Lucia
Trinidad & Tobago
Haiti
Dominican Republic

These criteria are neither mutually exclusive nor identical. For example, although an important proportion of indigenous groups is in the lower quintiles of income and lives in areas unlikely to be served, this is not true for all the members of the ethnic groups. There are some that belong to higher groups of income, or that live in areas with reasonable access to services. For this reason it is necessary to know in detail each specific situation before combining the different measures of exclusion presented.

4.3. Service supply and exclusion. In this proposed set of indicators **a supply of services** indicator is based on an accepted benchmark establishing desirable levels of supply. The assumptions being that people beyond the supply capacity of the system are excluded[18].

4.3.1. The first indicator considered was **Number of Doctors per capita[19]**. The norm is used as a basis, and by difference we obtain the excluded. From this angle, **23.6 million people** remain excluded from the system (about 5% of total LAC population).

Absolute numbers

The ten countries with the least doctors per capita are, in general, medium and small size countries such as Haiti, Bolivia, Nicaragua, Guatemala, Paraguay, Honduras, Jamaica, El Salvador and Guyana.

Relative numbers

The countries with the higher rate of population excluded of health care on grounds of doctors per capita are Haiti, St. Lucia, Guyana, St. Vincent, Bolivia, Nicaragua, Granada, Jamaica, and Belize. Rates show that all of these countries would have more that 40% of their population excluded from health care from this indicator.

This indicator seems to contradict all others, particularly as the English speaking Caribbean countries, that can be recognized as a group of countries with rather low level of exclusion from other measures show very high up here. Conversely, countries like Peru and Ecuador (which show very high on other indicators) seem to be among those without exclusion. There are explanations for both. First, in very small islands the normative value of physicians per capita may be meaningless. Furthermore, existence of an ample number of other health workers such as nurses, combined with reasonable preventive health associated with NHS may lower the requirement for doctors.

A second consideration, applying to larger countries is distribution. It is possible that the average number of doctors per capita in a country is reasonable for some bigger countries. But they tend to be highly concentrated in the main cities. Thus there is a large level of excluded that are

disguised under this indicator. As a conclusion we believe that this indicator should only be used in a specific context of a national study, as many questions need answers before the conclusions from this view are applicable.

Table 6.

NUMBER OF DOCTORS PER CAPITA

Ten countries with fewer doctors per capita

Absolute numbers		**Relative Numbers**
Haiti	1	Haiti
Bolivia	2	Santa Lucia
Nicaragua	3	Guyana
Guatemala	4	S. Vincent & the Grenadines
Paraguay	5	Bolivia
Honduras	6	Nicaragua
Jamaica	7	Granada
El Salvador	8	Jamaica
Guyana	9	Belize

Countries where doctors per capita is not a good indicator to measure exclusion of health care

Colombia
Ecuador
Peru
Venezuela
Argentina
Chile
Uruguay
Brazil
Costa Rica
Panama
Mexico
Cuba

4.3.2. In a similar way, a supply tracer of exclusion is **the percentage of population without access to drinking water and sewerage**, or basic sanitation. This way we come to some **152 million** people, or 32% of the LAC population.

Table 7.
ACCES TO DRINKING WATER AND SEWERAGE

Ten countries without access to water or sewerage

Absolute numbers		**Relative Numbers**
Brazil	1	Haiti
Mexico	2	Paraguay
Colombia	3	Nicaragua
Argentina	4	Belize
Chile	5	Bolivia
Peru	6	El Salvador
Venezuela	7	Uruguay
Haiti	8	Ecuador
Ecuador	9	Argentina
Bolivia	10	Colombia

Countries where drinking water and sewerage is not a good indicator to measure exclusion of health care

S. Lucia
Saint Kitts and Nevis
S. Vincent and the Grenadines
Antigua and Barbuda
Dominica
Granada

4.4 Health process indicators. There are certain health interventions considered by the community as "necessary" and "useful", in the sense that no one would avoid them if possible. For example there is broad consensus that maternal and child health services are important. If some population does not utilize them, it would indicate exclusion.

4.4.1. Number of institutionalized births. The first proposed indicator of this type is the number of deliveries unattended by trained personnel. Birth statistics can be obtained from civil registries, and the number of institutional deliveries from health statistics. The difference will be the number of unattended births. This number can then be adjusted for the rate of fertility and the family average size to rebuild the number of people excluded from this service. In Latin America and the Caribbean the population excluded amounts to **83.5 million people**, which represents 17% of the total population.

Absolute numbers

Absolute numbers show that countries with higher exclusion from the SS health care services are also the ones with higher incidence of non-institutionalized births. These are Mexico, Brazil, Peru, Guatemala, Bolivia, Ecuador, Haiti, Paraguay, Honduras and El Salvador.

Relative numbers

Bolivia, Paraguay, Guatemala and Haiti have rates over 60% of exclusion base on non-institutionalized births and Honduras, Peru, El Salvador and Ecuador over 40%.

Mexico has twice the level of exclusion based on non-institutionalized births as Brazil or Peru: 24 million Mexicans or 26% of its population.

Bolivia, Guatemala, Haiti, Peru, Ecuador, and Mexico are the countries that rank highest for both absolute and relative numbers.

English speaking Caribbean countries, Cuba and Chile show no exclusion from health services on these grounds.

Table 8.

NUMBER OF NON-INSTITUTIONALIZED BIRTHS

Ten countries with highest exclusion based on non-institutionalized births

Absolute numbers		Relative Numbers
Mexico	1	Bolivia
Brazil	2	Paraguay
Peru	3	Guatemala
Guatemala	4	Haiti
Bolivia	5	Honduras
Ecuador	6	Peru
Haiti	7	Ecuador
Paraguay	8	El Salvador
Honduras	9	Mexico
El Salvador	10	Belize

Countries where non-institutionalized births are not a good indicator to measure exclusion of health care

Bahamas
Chile
Cuba
Antigua y Barbuda
Barbados
Dominica
Granada
Saint Kitts y Nevis
S. Vincent and Grenadines
Santa Lucia

4.4.2. Number of follow up vaccinations. A second indicator of this type that can be dealt in a similar fashion is the number of desertions from the second doses of BCG vaccines. Here we assume that when monitoring children visits do not occur is because families either do not consider that the costs (of transportation, of opportunity or others) are worth it, or simply because they cannot afford them. Both explanations aim at exclusion, presuming that no one wishes to leave unprotected their children. Utilizing a construction similar to the previous indicator, the size of exclusion can be estimated **at 82 million people** (**16.5% of the total** of the population). The gap is more marked in Venezuela, Peru, Paraguay, and Brazil.

Absolute numbers

Absolute numbers shown here reveal again that the five countries that rank highest for exclusion from the SS health care services are the ones with lower incidence of follow up vaccinations. These are Brazil, Mexico, Venezuela, Colombia and Argentina. The ratio between Brazil and Mexico's excluded is more than 2 to 1.

Relative numbers

The countries that rank higher in absolute numbers are the same for relative numbers: Venezuela, Ecuador, Paraguay, Brazil, Guatemala, Uruguay, Bolivia, Colombia, Mexico, and Argentina. The range goes from 15% in Argentina to 40% of the population excluded from health care in Venezuela.

Larger countries like Brazil, Mexico, Colombia and Argentina show very little exclusion based on follow up vaccination both in absolute numbers and in percentages. Smaller countries with low access to healthcare show smaller rates of exclusion from this angle (Haiti 11% and Dominican Republic 8%).

English speaking Caribbean countries show no exclusion from health services on grounds of non-institutionalized births. Peru on the other hand shows high incidence of exclusion based on follow up vaccination.

Table 9.

NUMBER OF FOLLOW UP VACCINATIONS

Ten countries with highest exclusion based on follow up vaccinations

Absolute numbers		**Relative Numbers**
Brazil	1	Venezuela
Mexico	2	Ecuador
Venezuela	3	Paraguay
Colombia	4	Brazil
Argentina	5	Guatemala
Ecuador	6	Uruguay
Guatemala	7	Bolivia
Paraguay	8	Colombia
Bolivia	9	Mexico
Chile	10	Argentina

Countries where follow up vaccinations is not a good indicator to measure exclusion of health care

Santa Lucia
Saint Kitts y Nevis
Antigua y Barbuda
Bahamas
Barbados
Dominica
Granada
S. Vincent and Grenadines
Suriname
Trinidad y Tobago

Although the precise identification of who is excluded is incipient still, the following are the most commonly identified groups[20]:

The poor in general, women, children, older adults, ethnic groups, the temporary or informal workers and the unemployed people and/or underemployed constitute the groups of greater risk of exclusion. Furthermore, the rural and scattered population has less probability of having access to the coverage in health.

5. Conclusions:

Larger countries like Brazil, Mexico and Peru show large numbers of exclusion from healthcare as measured by most of the indicators analyzed here. However, Brazil ranks high in absolute but not in relative numbers. This does not the case of Mexico and Peru. Both contribute with large absolute and relative numbers.

Other countries like Bolivia, Guatemala, Haiti, Ecuador and El Salvador show broad rates of exclusion at a national (relative) level, but without such impact at the regional level (absolute values).

Indicators such as SS, people living under the line of poverty, non-institutionalized births, ethnic population and number of doctor per capita, indicate a set of countries that appear to have the multiple burden of all these approaches: Guatemala, Ecuador, Peru, Bolivia and Mexico.

Whatever the measured utilized, at least 20% of the population of Latin America and the Caribbean are excluded. Which indicator better reflects reality depends on the specific conditions of each country or region. For this reason, for the purposes of this paper the complete series of numbers stemming from the indicators are presented at the continental level. Countries are only ranked for each indicator.

However some national conclusions can be advanced. First, most English-speaking Caribbean countries have national health insurance systems, which means that their SS is limited to cover unemployment and old age pensions, but not health. For this reason the indicator of lack of coverage of social security is not adequate in these countries.

Second, the cultural indicator is very relevant in countries with important ethnic groups, for example Bolivia, Guatemala, Peru and Ecuador. However it may not be a good representative of the situation in more homogeneous countries, as Uruguay for example.

Third, some of the process indicators are very sensitive to internal distribution, like the number of doctors. As it was noticed above, elaboration of this indicator shows a relatively low level of exclusion, (24 million). However the figure of doctors per capita is an average. Their concentration in the capital and other major cities implies that exclusion may be low in those places from this angle, while rural areas may have serious problems. Many countries, particularly in the Southern Cone tend to be highly urbanized and will show this phenomenon. This indicator, therefore, should be more appropriate for countries with lower levels of urbanization. A similar conclusion can be obtained from analyzing the number of available beds, although it was not fully developed here for those same reasons

Finally, even though some indicators are more relevant that others for the different countries, it is important to emphasize that in many of the analyzed countries there is an element of colinearity between them at least in terms of ranking. Thus the indicators based on the medical supply, second dose of vaccination, deliveries without specialized care, low coverage of social security and poverty all point out high exclusions in Haiti, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Ecuador, Bolivia and Paraguay.

With this first approximation of the measurement of the levels of the exclusion and of the sectors most affected in the countries of Latin America and the Caribbean the debate of the subject has started and its importance is increasingly perceived. Based on this preliminary measurement the countries can intensify the analysis for the purpose of preparing sectoral policies redirected and focalized to achieve a greatest impact, reduce the existing inequities, and improve the conditions of life and the well-being of the population.

Dimension of Exclusion from Social Protection in Health
(Figures expressed in thousands)

Country	Population							
	Without theoretical social security coverage	Under the poverty line	Without geographical access to health services	Indigenous Population	Lacking medical supply	Non-assisted births	Not repeating BCG/vaccine	Highest % without access to drinking water or sewerage
	1995	1989-1994	1995	1992	1997	1996	1998	1995
Andean Area								
Bolivia	6,005	4,104	2,447	4,900	4,267	5,466	1,244	4,004
Colombia*	34,302	6,688	7,323	6,00		1,571	6,006	13,104
Ecuador	9,283	3,920	1,375	4,100		4,796	3,858	4,928
Peru	16,472	7,392	13,178	9,300		10,537	785	7,060
Venezuela	13,980	6,634	3,872	400		1,116	8,655	6,116
Southern Cone								
Argentina	14,255	8,918	10,083	350		1,761	5,351	12,169
Chile	1,847	3,360	426	1,000		0	1,024	2,132
Paraguay	3,911	1,034	17,86	100	1,997	3,173	1,323	3,283
Uruguay	1,191	192	0			32	620	1,577
Brazil	31,922	26,673	43,432	300		12,949	32,817	52,670
Central America								
Belize	0	70	s/d	29	85	46	23	131
Costa Rica	533	363	711	30		110	262	
El Salvador	4,875	2,090	3,401	400	952	2,199	477	2,891
Guatemala	8,380	5,974	4,290	5,300	2,314	6,659	2,104	3,292
Honduras	4,862	2,915	1,753	700	1,819	2,675	598	1,300
Nicaragua	3,629	2,000	752	160	2,339	592	234	2,788
Panama	1,026	780	789	140		375	191	316
Mexico	46,484	30,464	6,380	12,000		24,105	14,141	24,609
Latin Caribbean								
Cuba	0	s/d	0			0	221	1,096
Haiti	7,622	4,550	3,049		7,253	4,193	791	5,564
Dominican Republic	7,275	1,617	1,721			796	648	2,788
English Caribbean								
Antigua and Barbuda	0	12	s/d		15	0	0	3
Bahamas	0	s/d	s/d			3	0	17
Barbados	0	s/d	s/d			0	0	N/d
Dominica	0	33	s/d		38	0	0	11
Grenada	0	20	s/d		47	0	0	18
Guyana	0	344	s/d	45	708	59	102	292
Jamaica	0	768	245		1067	247	199	392
S. Kitts and Nevis	0	15	s/d		5	0	1	4
S. Vincent & Granad.	0	17	s/d		60	0	0	8
Saint Lucia	0	25	s/d		95	0	6	0
Suriname	0	s/d	s/d	30	108	86		110
Trinidad & Tobago	0	273	0		374	13		52
Total	217,855	121,254	107,013	39,932	23,643	83,558	81,682	152,675

Source: ILO/PAHO. (1999). "Overview of exclusion of the social protection in Health in Latin America and the Caribbean". Document of the tripartite regional meeting of the ILO with collaboration of PAHO, Mexico 29/11-1/12/99.

*In 1998 the coverage was 73%.

[1] This article is based in the documentation presented and discussions held at the Regional tripartite meeting of ILO with the cooperation of PAHO on Extension of Social Protection in Health to the Excluded Groups in Latin America and the Caribbean that took place in Mexico City in December 1999. This meeting was part of a larger initiative of these organizations on ESPH.

[2] **ILO/PAHO (1999): "**Elements for the comparative analysis of the social extension of coverage in health in Latin America and the Caribbean". Document of the tripartite regional meeting of the ILO with collaboration of PAHO, Mexico 29/11-1/12/99 .

[3] For the implications of exclusion in health see **Rosenberg, H., Andersson, B., and Lopez Acuña, D.** "Repensando la Protección Social en Salud en América Latina y el Caribe" to be published in Revista Panamericana de Salud Pública, July-August, 2000.

[4] **ILO/PAHO (1999):** "Overview of exclusion of the social protection in Health in Latin America and the Caribbean". Document of the tripartite regional meeting of the ILO with collaboration of PAHO, Mexico 29/11-1/12/99.

[5] See for instances **Kliksberg, B.** (comp.) "Pobreza, un tema impostergable". Nuevas Respuestas a nivel mundial. CLAD-PNUD Fondo de Cultura Económica, 1993.

[6] **ILO/PAHO (1999)**: "Overview...

[7]**PAHO (1998):** "Health in the Americas" Vol. I and II Scientific Publication Not 569, Washington, **CASTRO GUTIERREZ, A. (1999):** "Evolución de la Protección de la Salud en el Proceso de Reformas Políticas e Institucionales. En II Seminario: Procesos de Reforma de la Seguridad Social en Materia de Salud. Análisis de los procesos en marcha." Conferencia Interamericana de Seguridad Social. Serie Estudios No. 47. OIT. **MESA- LAGO Carmelo, (1992) "**Atención de Salud para los Pobres en América Latina y el Caribe". Copublicación OPS y Fundación Interamericana. Publicación Científica Nº 539.

[8] In the Latin American context Social Security normally refers to the institution that collects and manages contributions made by workers (usually formal sector) and/or governments. These are usually utilized to provide health, pension and other work related benefits. In the English Caribbean and some Latin countries the Social Security does not cover health interventions, because they are part of a National Health Insurance or other such scheme.

[9] **PAHO/WHO**, Initiative of Health Sector Reform for Latin America and the Caribbean, Profile of the Health Services Systems. Years 1998-1999.

[10] See **ILO/PAHO (1999)**. "Synthesis of case studies of microinsurance and other modalities of social protection in health in Latin America and the Caribbean". Document of the tripartite regional meeting of the ILO with collaboration of PAHO, Mexico 29/11-1/12/99.

[11] See **ILO/PAHO (1999):** "Out of Pocket Health Expenditures in Latin America and the Caribbean: the Efficiency Rational for Extending Social Protection in Health". Document of the tripartite regional meeting of the ILO with collaboration of PAHO, Mexico 29/11-1/12/99.

[12] The basic data is presented in annex I

[13] **ILO/PAHO (1999)**: "Overview...

[14] **PAHO (1998)**: Health in the Americas and **ILO/PAHO (1999)**: "Overview...

[15] **United Nations Development Programme(1998)**. "Human Development Report 1998". New York. Oxford University Press.

[16] The **United Nations Development Programme Human Development Report** defines appropriate geographical access as the percentage of the population that can reach appropriate local health on foot or by local means of transport in no more than one hour.

[17] **PITTMAN, Patricia (1999)**: "Gendered Experiences of Health Care". International Journal for Quality in Health Care 1999; Volume II, Number 5.

[18] **ILO/PAHO (1999):** "Overview...

[19] Standard used is 1 doctor for every 1000 people.

[20] **TOKMAN, Víctor (1998):** "La informalidad en los Noventa: Situación Actual y Perspectivas". Cuadernos de Políticas Sociales Nº 2. Secretaría de Desarrollo Social. Presidencia de la Nación. Argentina.