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**Analysis of Health Indicators Followed by
Different Agencies
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I. Introduction

As described in the latest CISS' Report (CISS 2008) performance indicators play a key role in health policy evaluation as they help keep track of operations and outcomes. To facilitate the study of indicators we have classified them into two categories: Simple and complex indicators¹. Broadly speaking, simple indicators are those based upon ratios and give only partial information while complex indicators give more consistent results, answer more questions and are more useful for evaluation purposes, but they are not easy to produce and then are not easily and periodically available.

The purpose of this paper is to make a review of performance indicators produced in Latin America and Caribbean (LAC) and its availability for the public for most common health system's goals: 1) improve populations' health, 2) horizontal equity, 3) vertical equity, 4) macro-efficiency, 5) micro-efficiency, and 6) user's satisfaction.

To carry out our review we consulted Health Statistic Institution's websites for a sample of LAC countries and classified the information found in statistics, reports, survey reports, query interfaces, special studies among other sources of information publicly available. For comparison purposes we present our finding in tables showing the availability of simple and complex indicators for each of the six most common health system's goals.

Summarizing our findings we found that simple indicators are more common than complex ones, however countries are increasing the production of complex indicators mainly those regarding to improve population's health where years of potential life lost and effective coverage are becoming part of the health basic indicators in many countries. We also notice a bias towards improvement of population's health indicators where are variety of both simple and complex indicators are frequently available, while indicators for other health system's goal such as user's satisfaction are almost unavailable. In this latest case we found that only a few countries provide simple indicators on user's satisfaction, but none of them provide complex indicators.

It is worth to mention that still some countries fail to provide basic indicators of private health expenditure and among those that does, few of them assess the out-of-pocket expenditure which is a key (basic) indicator of the vertical equity of a health system.

The rest of the paper is devoted to show our findings. Sections II to VII presents comparative tables on availability of indicators for the six selected health system's goals. Section VIII presents a review of those countries that has a special unit for health statistics and finally Section IX has some final remarks.

¹ For detailed explanation on our classification as well as for literature review on performance indicators classification see CISS (2008), Chapter IV.

II. Indicators related to improve population's health

Table 1
Indicators Related to Improve Population's Health

Country	Simple indicators: mortality, morbidity, risk factors	Complex indicators: effective coverage, health related quality of life indicators
Argentina	X	X
Bolivia	X	
Brazil	X	
Canada	X	X
Chile	X	X
Colombia	X	
Costa Rica	X	X
Cuba	X	X
Ecuador	X	
El Salvador	X	
Jamaica	X	
Mexico	X	X
Nicaragua	X	
Panama	X	
Paraguay	X	
Peru	X	
Puerto Rico	X	
United States	X	X
Uruguay	X	
Venezuela	X	

Source: See statistical references

III. Indicators related to horizontal equity

Table 2
Indicators Related to Horizontal Equity

Country	Simple indicators: constitutional entitlement, entitlement and access	Complex indicators: outcomes and access inequality measures. E.g. inequality with respect to life years and quality adjusted life-years (Qalys)
Argentina	X	X
Bolivia	X	X
Brazil	X	X
Canada	X	X
Chile	X	
Colombia	X	
Costa Rica	X	X
Cuba	X	X
Ecuador	X	X
El Salvador	X	X
Jamaica	X	
Mexico	X	X
Nicaragua	X	
Panama	X	
Paraguay	X	
Peru	X	
Puerto Rico	X	X
United States	X	X
Uruguay	X	X
Venezuela		

Source: See statistical references

IV. Indicators related to vertical equity

Table 3
Indicators Related to Vertical Equity

Country	Simple indicators: public and private spending	Complex indicators: financial inequality measures, catastrophic and impoverishment expenditures
Argentina	X	
Bolivia	X	
Brazil	X	
Canada	X	
Chile	X	
Colombia	X	
Costa Rica	X	X
Cuba		
Ecuador	X	
El Salvador	X	
Jamaica		
Mexico	X	X
Nicaragua		
Panama		
Paraguay	X	
Peru		
Puerto Rico		
United States	X	X
Uruguay	X	
Venezuela		

Source: See statistical references

V. Indicators related to macro-efficiency

Table 4
Indicators Related to Macro-efficiency

Country	Simple indicators: overall health expenditure	Complex indicators: fiscal viability
Argentina	X	
Bolivia	X	
Brazil	X	
Canada	X	
Chile	X	
Colombia	X	
Costa Rica	X	X
Cuba	X	
Ecuador	X	
El Salvador	X	
Jamaica	X	
Mexico	X	
Nicaragua	X	
Panama		
Paraguay	X	
Peru	X	
Puerto Rico		
United States	X	
Uruguay	X	
Venezuela		

Source: See statistical references

VI. Indicators related to micro-efficiency

Table 5
Indicators Related to Micro-efficiency

Country	Simple indicators: ratios of users to infrastructure and human resources	Complex indicators: efficiency curves, e.g. DEA
Argentina	X	
Bolivia	X	
Brazil	X	
Canada	X	
Chile	X	
Colombia	X	
Costa Rica	X	
Cuba	X	
Ecuador	X	
El Salvador	X	
Jamaica	X	
Mexico	X	
Nicaragua	X	
Panama	X	
Paraguay		
Peru	X	
Puerto Rico	X	
United States	X	
Uruguay	X	
Venezuela		

Source: See statistical references

VII. Indicators related to user's satisfaction

Table 6
Indicators Related to User's Satisfaction

Country	Simple indicators: different measures of subjective satisfaction /objective measures of treatment (time to surgery)	Complex indicators: expected adjusted satisfaction of users/economic analysis
Argentina		
Bolivia		
Brazil		
Canada	X	
Chile	X	
Colombia		
Costa Rica	X	
Cuba		
Ecuador	X	
El Salvador		
Jamaica		
Mexico	X	
Nicaragua		
Panama		
Paraguay		
Peru		
Puerto Rico		
United States		
Uruguay	X	
Venezuela		

Source: See statistical references

VIII. Special units for health statistics in LAC countries

Table 7
Special Units for Health Statistics, by Country

Country	Health Statistics Unit	Link
Argentina	Dirección de Estadísticas e Información en Salud (DEIS)	www.deis.gov.ar
Bolivia	Sistema Nacional de Información en Salud y Vigilancia Epidemiológica (SNIS)	www.sns.gov.bo/snis
Brazil	Rede Interagencial de Informações para a Saúde (RIPSA)	www.ripsa.org.br
Canada	Canadian Institute for Health Information	http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=home_e
Chile	Departamento de Estadística e Información en Salud	http://deis.minsal.cl/index.asp
Colombia		
Costa Rica		
Cuba	Dirección Nacional de Estadística	www.dne.sld.cu
Ecuador		
El Salvador		
Jamaica		
Mexico	Sistema Nacional de Información en Salud (SINAIS)	www.sinais.salud.gob.mx
Nicaragua		
Panama		
Paraguay		
Peru		
Puerto Rico		
United States	National Center for Health Statistics (NCHS)	www.cdc.gov/nchs
Uruguay		
Venezuela		

Source: Own elaboration

IX. Final Remarks

To conclude this brief review we would like to highlight two points. First, there is a trend towards increasing the elaboration of complex indicators. Second, many countries have developed specialized units for health statistics, either as part of the country's Ministry of Health or as external entities these units range from information systems, to offices and Institutions with the purpose to produce, collect and publish health data as well as documents. However, we also see a high level of heterogeneity among countries. While, as mentioned before, many countries have made an effort to produce complex indicators and have at least an information system to publish health data, some other countries fail to produce or make available simple indicators.

As much as simple and complex indicators become available in a regular basis, evaluation of health system's performance will be benefited. The production and publication of these indicators among all countries is a desired task for LAC countries, especially for those that do not have a developed system of health data.

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