Oswaldo Cruz Foundation - Ministry of Health

REPORT OF THE WORKSHOP “HEALTH SYSTEMS PERFORMANCE - THE WORLD HEALTH REPORT 2000”

Rio de Janeiro, 14 -15 December 2000

VERSION 1

REPORT OF THE WORKSHOP "HEALTH SYSTEMS PERFORMANCE: THE WORLD HEALTH REPORT 2000"

Introduction

In June 2000, the World Health Organization issued the *World Health Report 2000* (WHR 2000), the main aim of which was to compare the performance of health systems of all the Member Countries of the WHO. For this purpose, an index was created consisting of five indicators known collectively as the *Overall Health System Performance* index*.* Using this methodology, the World Health Organization now proposes to begin monitoring the health systems of all the Member Countries on a regular basis.

The WHR 2000 makes an important contribution by reflecting the commitment of the World Health Organization to place on its agenda a procedure for monitoring performance of the health systems of the Member States. However, the less than transparent manner in which the WHR 2000 document was produced, together with the deployment of scientifically questionable evaluation criteria signal an urgent need to undertake a detailed critical analysis and revision of this document. At the same time, it follows that there is an immediate requirement to present proposals whose objective would be to re-direct the above mentioned monitoring process.

The present document is a summary of the debates, which took place at a Seminar held in Rio de Janeiro, Brazil, in December 2000. The purpose of the Seminar was to evaluate the WHO proposal to institute monitoring of health systems performance on a regular basis. Discussion was based on the annexed paper - *Views on the World Health Report 2000* [1.] The seminar was attended by a group of researchers from FIOCRUZ (Oswaldo Cruz Foundation), together with other members of the Brazilian and international scientific community.

The WHR 2000 Concept of a Health System

According to Richard Feacham, Editor in Chief of the *Bulletin of the World Health Organization,* the WHO – by issuing WHR 2000– was effectively signaling its assumption of the role previously played by the World Bank during the 1990s, a decade during which the Bank became more closely associated with the formulation of health orientated policies. Feachem recalls that the administration which took over at the World Health Organization in 1998 was in effect sending out a message that it intended to begin operating in non medical areas, including those which impinged on subjects such as economic and financial matters related to the health sector (Feachem, 1999).

[1]. Prepared by a group of FIOCRUZ researchers: Alicia Ugá (ENSP), Célia Landmann Szwacwald (CICT), Célia Almeida (ENSP), Cláudia Travassos (CICT), Francisco Viacava (CICT), José Mendes Ribeiro (ENSP), Nilson do Rosário Costa, (ENSP), Paulo Buss (ENSP) and Silvia Porto (ENSP).

The WHR 2000 was devoted to an analysis of health service systems. Its authors believe that they have (a) defined new frontiers for the health services and (b) broadened the "traditional" concept of health, an approach that had formerly been maintained by the WHO. The decision of the authors of the Report to select that particular new approach was intended to represent a significant departure for the Organization insofar as it was to reflect the idea that the WHO was in tune with the "new principles" being advanced as part of the modernizing debate concerning contemporary reform sectors.

The idea of health as "total physical and mental well-being" is in direct contrast to the emphasis placed upon it in the WHR 2000 on a series of new features: the best attainable average level – goodness – and the smallest feasible differences among individuals and groups – fairness. The key functions of health systems, which encompass the provision of services, the generation of resources, financing and responsible management of such systems (*stewardship*), are henceforth, according to the Report, to be primarily focused on obtaining the best standards of health together with putting an end to inequalities. The fundamental idea behind this new formula is "new universalism", a concept which is based on the premise that it is impossible to make provision of everything for everyone and as a result it is therefore necessary to define priorities and to rationalize the distribution of essential services, defined according to criteria of cost-effectiveness and "social acceptance", without by so doing excluding population groups (WHO, 2000: xi). In addition, the authors of the WHR 2000 assert that the fundamental ideological change resides in the more prominent emphasis to be placed upon individual choice and responsibilities which, in political terms, means that distinctions effectively have to be made regarding expectations of what one can expect to receive from the State by way of social benefits in the health area (WHO, 2000:xiii).

The WHR 2000 document fails to make entirely clear where the limits of the health systems in reality lie. Furthermore, while the Report makes ample reference to those services within collective reach, the definition of this adopted in the document is ambiguous and insufficiently explained. The exclusion for example of a number of activities which are traditionally part of the public health area raises doubts as to whom exactly this new concept of health care provision is directed. Furthermore, the thrust of the report is centered on medical care, thus missing an excellent opportunity to propose a reversal of the way in which health systems are structured in the widest terms. The WHR 2000 goes on to put a very considerable degree of faith in medical technology, attributing to it many qualities that are extremely difficult to substantiate (Navarro, 2000).

Pursuing its strategy of supposed renewal, the WHR 2000 crudely discards those political strategies previously implemented in former decades by the WHO itself. Examples of this are the policies of *Health for All in the Year 2000* (introduced in 1975) and that of *Primary Care* (Alma Ata, 1978). The WHR 2000 affirms that these particular policies failed because they paid scant attention to the demands of individuals and concentrated almost exclusively on their perceived needs (WHO, 2000:xiii). The WHR 2000 chooses to disregard the political importance of these strategies, as well as the circumstances, which either facilitated or impeded the appropriate implementation of the said strategies. At the same time, the WHR 2000

criticizes countries' health systems, principally those mainly run by the State, appropriating the arguments put forward by the neo-conservative analysts of the 1980s. Their judgments are advanced without any empirical foundation whatsoever, whether in respect of the successes or of the failures to which they allude in the document.

In their superficial references to the different "stages of sectoral reform" which have emerged in the course of the twentieth century, the authors of the Report fail to mention the economic crises of the 1970s and 80s and the consequences of these events - such as the need to reduce fiscal imbalances and to introduce more sustainable macro-economic conditions, both of which obliged (a) countries at the center of the world stage to recalculate their sectoral expenditures as a percentage of GDP, in order to avoid them getting totally out of control and (b) those countries on the periphery which had no option but to make deep, long term economic adjustments which in due course involved them in recession and chronic instability alongside a radical dismantling of previous achievements in terms of social and health policy, which were already, in many countries, in a highly precarious state.

The WHR 2000 limits itself to extolling the benefits of technological development insofar as medical care is concerned. Such development is considered by the authors of the Report as irrefutable proof of the contribution made by health systems to the overall health conditions of populations, in spite of all the evidence to the contrary which has been amply documented in the relevant literature. The Report goes on to identify the "line of market-orientated reforms" as a hegemonic trend in the process of the development of health systems, predominantly over the last couple of decades, as well as it being the most suitable strategy to achieve the dual objectives of better health standards and the leveling out of inequalities in the health sector. Again, the document makes no reference to any evaluation of these reforms, although there exists ample specialist literature dealing with the issue.

The central thesis of the report lies in the proposal to introduce a new methodological approach in order to evaluate the performance of health systems insofar as the fulfillment of their four basic functions is concerned. In this way, the authors of the document claim to be able to bring about a change in the "ideological discourse" currently taking place in debates related to public health, and to sway the discussion towards a more scientific posture "based upon empirical evidence" (Murray & Frenk, 1999:728).

This "new concept" with which WHR 2000 aligns itself is a manifestation of the identification of the present administration of the World Health Organization with a distinctive political project. The individual in the health system is effectively regarded as a supplier of services, as a professional, as a taxpayer or as consumer- but never as a citizen with a right to receive social benefits in the health field. The position adopted therefore assumes, albeit not explicitly, the principal premises of the neo-liberal reformist ideology which held sway in the 1980s, namely that of reducing the size of the public sector, increasing the participation of the private sector, privatizing and delegating decision-making to independent agencies. Within the health arena, this set of ideas was construed into the formulation of a *post-welfare state* reform agenda. This reform agenda for the health sector went clearly hand in hand with the widespread global movement at

the time, predicating reform of the State, which chose to call into serious question the ways in which the world's various health service systems had been organized to date and the extent to which they had been performing their allotted functions (Almeida, 1995). Summarizing the issue, one could assert that the key questions at the basis of the formulation of the above mentioned reformist efforts are: (a) an attempt to contain the costs of medical care, through efforts to achieve the greater efficiency of such care; (b) the restructuring of the public-private mix, with emphasis placed on the decentralization of activities and responsibilities (both operational and financial), at sub-national government levels as well as for the private sector actors involved, and (c) an increased financial participation by users of the health services, whether in the public or private domains. The conservative side of this reformist agenda is restricted to the question of individual medical care, focused primarily upon cost restrictions in this sub-sector. On the ideological level, the main thrust was to de-politicize the sectoral arena, generally considered to be highly technical, to give more prominence to managerial and management related activity, to remove doctors from their role as the main causal agent of health expenditure (demand-inducers) and to introduce business oriented methods into institutional arrangements as the sequel of which the latter would allegedly become more efficient.

Seen from this angle, the WHO thus aligns itself with the ideological current which predicates the application of the same reform agenda throughout the world, and whose central proposition would be that of "Managerialism", *advocating that the traditional hierarchical bureaucratic structures, with their inherent normative procedures and rigidities are harmful to the public interest and furthermore are inefficient as well as ineffective. The key change of the focus of attention is from those activities or "products "of governmental agencies (output) towards the results of those activities (outcomes)* (Kettl, 1996: 38-4, *apud* Almeida, 1999).

Regarded from the viewpoint of "market oriented reform" (Almeida, 1999), these premises are translated into the fostering of managerial flexibility, primarily focused on the breaking of State monopolies, on the supply of services and on decentralization; on the removal of "bureaucratic obstacles"; on attending to the demands of the consumers; on the introduction of market based competition methods in the form of "genuine" incentives to encourage higher standards of efficiency and to build a more competent management structure; on the contracting out to third parties; on investment in new information technology, with the stated aim of slimming down organizations; and to focus attention on change to be effected in procedures and processes.

These features have been incorporated in new reform models in a number of different countries. They have been conceived in a deeply pragmatic manner and constitute the so-called "*new public management*". A great deal of energy has been expended on defining the most appropriate instruments available for putting the ideas into practice and heavy investment has been made since the mid 1980s in the development of methods for measuring performance results and in the actual performance of service systems, with the overall aim of evaluating how consumer demand is being catered for.

As regards the first part of this equation, performance assessment, this in general terms implies doing work over a series of different stages (Kettl,1996: 43) in relation to a number of aspects, as follows: the institutional mission (or that of the system); its targets and objectives; the indicators related to measuring the stated objectives (*outputs)* - meaning all the activities and the volume of services produced vis-à-vis the resources invested; plus the results indicators *(outcomes*), basically meaning the evaluation of the effectiveness of the said systems and programmes. The constant challenge is how to decide what is meant by "more effective", since this presupposes assessments which are not made purely on the basis of technical parameters but include the involvement of political criteria as well. In other words, performance evaluation seeks to judge how efficiently a health system is able to translate its *inputs* (in this case, with particular regard for public investment) into *outputs* (health activities or systems), and to ascertain the nature of the effectiveness of those activities in achieving particular health policy targets (*outcomes*). A false dilemma is thus created, as Kettl asserts (1996): whether to assess services (*outputs)* or the results of their activity in the population (*outcomes*) ? These two dimensions are inexorably intertwined and the complexity involved in the establishment of a system performance assessment in the health services context is substantial. Due to the difficulties inherent in sophisticated results evaluations, particularly in the health field, the assessment of consumer satisfaction has come to act in effect as a sort of *proxy* of performance assessment.

As for the second part of the question – focusing services on the consumer – who after all is the key element in the market-oriented reforms, the underlying logic is to break the State monopoly which acts to restrain the citizen's free choice. Generally, it is said that it is not privatization *per se* which introduces efficiency, but rather competition for consumers. It is supposed to be the latter which gives sufficient incentive to the suppliers to provide a better service, whether in the public or private sectors (Kettl, 1996: 50, *apud* Almeida,1999).

In short, in spite of the great enthusiasm shown for performance assessment and consumer satisfaction, the prospect of it in fact serves to create a series of tensions, since at the same time as it improves working relations between bureaucrats, politicians, policy makers and ordinary citizens, it can also subject legal, political and normative considerations to the mercy of "the demands of the consumers", which is not always a good recipe for better results. In any case, the available literature warns of the complexity of the interlocking relationships inherent in these changes and, above all, draws attention to the operational difficulties that they tend to create.

The whole movement in the field of health reforms, which from the 1980 onwards spread out on a global scale, gave rise to a number of models, which were clearly extolled as new paradigms for restructuring health service systems and furthermore, which were given adulatory prominence by the WHR 2000. In general terms, they are all focused on some type of change strategy among which can be noted (Almeida, 1999) the following: the introduction of rationalizing measures for medical care; a separation between supply and the financing of services (or between purchasers and service providers), together with the strengthening of the regulatory capacities of the State; the building of "regulated or managed markets",

with the introduction of managed competition (managed care, managed competition, internal markets, public competition); and the employment of a wide variety of subsidies and other incentives (as regards both the supply and demand sides) aimed at the restructuring of the public and private mix and the breaking of State "monopolies".

For Latin America (including Brazil) and the peripheral countries in general, this international reference has been important, although the sectoral reform processes in the majority of cases have not been brought about as the result of excessive expenditure but by the exacerbation of inequalities which themselves are the product of poor income distribution and shortfalls in the provision of services and benefits. This has gone hand in hand with a noticeable deterioration in the living conditions of the majority of people living in those countries and the impoverishment of large sections of our populations (ECLAC, 1990, 1993; PAHO/ECLAC, 1994; Bustello, 1994; Hoeven & Stewart, 1993; Borón, 1995). The deterioration came about as the result of macroeconomic policies that paid scant attention to social policies except when viewed as part of an allocation of disbursements emanating from fiscal policies, and the outcome was that public investment suffered a severe downturn, while infrastructure deteriorated along with services and management capacity (Hoeven & Stewart, 1993:13). On the other hand, the policies have shown a tendency to run in parallel with the advent of democratic regimes, restored after a series of complex political transitions.

The inclusion of the theme of sectoral reform on the Latin American political agenda has taken on a fairly complicated profile. The same reform models have been diffused and predicated across the Region by international organizations, especially by the World Bank, and they are closely bound up with the stabilization plans and programmes of economic adjustment, especially as far as the withdrawal of the commitment of the State vis-à-vis the supply of medical services to their populations is concerned, as well as the State's undertakings to restructure the public-private mix and the focus of the public sector attention on the poorest and neediest in their populations (by means of subsidies, provision of emergency rations etc).

It could be said that this agenda has been gradually restructured, at the regional level, by policy makers in the different countries, by the international agencies, by the intellectual classes and by opinion formers. This can be observed from the distinct reforms that have been effected or proposed in countries throughout the region (World Bank, 1989,1993; Musgrove, 1995,1996; PAHO and ECLAC, 1994, PAHO, 1995, Londoño & Frenk, 1995 and Frenk et al, 1994). The concept of national health insurance linked to the proposal of managed competition, reformulated for the region under the name of "structured pluralism" (Londoño & Frenk, 1995) or a "tropical version" of the American scheme of managed competition (Londoño, 1996), has been paraded as the most suitable way of reforming the various health systems in the region. The idea has, it is interesting to note, been in the course of implementation in Colombia since 1993[2.]

[2] The priliminary proposal – "structured pluralism" was presented by Juan-Luis Londoño in the Special Meeting of Ministers of Health from Latin America and the Caribbbean on Health Sector Reform, held in Washington DC, in september 29-30, 1995. The meeting was organized by the following organizations:

It is worth recalling that in spite of the wave of reforms throughout the world, it is no easy task to assess the results of the reforms. It is even more problematic to prescribe the best or better way of proceeding since, although many of the ideas underlying these reforms are relatively attractive on paper, their implantation is often fraught with problems, frequently unexpected by whoever formulated them in the first place, but often arising from the haste with which they were introduced - together with the innate pragmatism of the reforms themselves, allied to problems associated with the implantation of new methods which tended to clash with those methods already in use. As a general rule, the systems being used previously are dismantled, without due thought being given to how the new systems will be absorbed, especially in the countries on the periphery. The importation or "imposition" of ideas has been encouraged in terms of a "menu of equivalent options" for a number of different countries, while it has been forgotten that in essence what exist are varying change strategies aimed at dealing with specific problems and circumstances in each of the different countries. Thus the methodological approach proposed by the WHR 2000 lacks any analytical foundation and is, in effect, basically normative and prescriptive.

The Performance Assessment Methodology in WHR 2000

In order to measure the different performances of health systems, the WHR 2000 employs a composite index known as the *Overall Health System Performance* comprising five different indicators. The first two indicators refer to the average level of health as measured by the *Disability Adjusted Life Expectancy at Birth* (DALE), with a weighting of 0.25 and its distribution, also weighted 0.25, with a total weighting of 0.50 on the composite index. The third and fourth indicators measure the *responsiveness* of health systems: the average value (weighted by 0.125) and distribution (weighted by 0.125), resulting in a total weighting on the composite index of 0.25. Finally, the fifth indicator- *Fairness of Financial Contribution*- refers to fairness as regards the contribution of families to the funding of the system and carries a weighting of 0.25. The last indicator is measured only from the point of view of its distribution, with a weighting of 0.25.

Health Indicators

The *Disability Adjusted Life Expectancy at Birth* (DALE) is an indicator that combines fatal and non fatal events to represent, in the form of a single figure, the state of health of a specific population. It measures average lifetime in years that a person of a given age can expect to live in good health. The indicator is calculated on the basis of life expectancy estimation by discounting the number of years that have been lived with some form of disability.

PAHO, World Bank, BIRD, CEPAL,OAS, UNICEF, United Nations Fund for Population Activities and USAID.

The indicator has been the subject of discussion in the specialized scientific literature. A number of issues have been raised as far as the indicator is concerned, such as: the absence of available data for the DALE calculation given the need to estimate disease prevalence rates and to measure the burden of diseases; and the subjective judgments when estimating burden of diseases and injuries (Murray et al, 1996a).

The methods employed to arrive at a measurement of disease and illness prevalence/cases and the associated complications involve an extremely complex procedure. In the first place, it is vital to know not only what the disease prevalence is. For chronic diseases, with complications, it is necessary also to be aware of the number of episodes of a given disease/illness or its complications, as well as how long the event lasted, in order to be able to estimate an "illness weighting", resulting either from the disease/illness in itself or in the wake of concomitant episodes. Both measurements are difficult to make. The other facet of the complexity of the measurement is the need to make adjustments for co-infections or illnesses, for example when HIV and Tuberculosis are both present in one patient, the weighting of the TB needs to be computed separately from the weighting applicable to the HIV, so as to avoid double counting.

To calculate the burden of diseases it is necessary to obtain data on about 483 cases of illness, disabilities, and their associated complications, which are then grouped together in seven levels of gravity. In general, these values are obtained indirectly through using panels of experts who award relative weightings to the whole group of cases of illness. It is a process which demands a great deal of decision-making, as has been freely admitted (Murray et al, 1996b), but it so happens that these judgments can be highly subjective and information can be biased. On the other hand, social factors such as age, chronological time and social situation can easily modify the weighting attributed to disablement. Furthermore, the technique of "person trade-off" is difficult to grasp and understand. In essence, it implies a value judgment and can result in a number of key ethical implications, such as has already been acknowledged by the authors of the method (Evans D, 2000).

Additionally, the cross-cultural differences which can produce significant divergences insofar as the measurements of burden of diseases and injuries are not taken into account.

A further crucial question arising from the DALE definition is that one person with a given disablement is not necessarily sick. All individuals are liable to manifest limitations and disabilities, but they are nevertheless able to administer them perfectly well, and do not present any health problems. However, whatever the disabling factor might be, whether it implies a health problem or not, the time lost as a result of that disability is, according to the DALE method of calculation, deducted from the healthy life expectancy figure.

In addition to these difficulties encountered in the construction of the DALE, a number of further limitations can be pointed out with respect to the way in which the indicator was calculated for the WHR 2000.

- Given the lack of adequate data, the calculation of the percentage of years lost through disability cannot be calculated for every country involved and has had to be estimated for determined groups of countries. In other words, the percentage deduction through disability was taken as a constant in all the countries in a specific group, which demonstrated similar levels of life expectancy at birth. Furthermore, the percentage of years deducted for disability is inversely and linearly proportionate to life expectancy at birth. As a result, the *DALE* (WHR 2000: Table 5) and life expectancy (calculated as an average of life expectancies at birth for males and females presented in Table 2 of the WHO Report), has a very high correlation coefficient, which is almost equal to 1 ($r = 0.996$). Therefore, it can be concluded that the utilization of the traditional indicator "life expectancy at birth" would produce practically the same results.

- There is no evidence that the DALE has enough sensibility and specificity to reflect health system actions in the short run. It is not suitable for adequately measuring the performance of health services. In fact, there are not sufficient evidences that show that variations in the health status of a given group, whether in terms of a given average or as regards the distribution over certain social groups, is predominantly a reflection of the actual manner in which health systems operate. The health conditions of a given population basically reflect the average quality of life of that society as well as the income distribution pertaining to it.

The application of this methodology as a monitoring instrument of performance of health systems of the Member Countries throws up a series of new questions: how viable is it to obtain the data needed for the elaboration of the DALE in different countries? If in poorer countries the acquisition of relevant information for life expectancy calculations is difficult, what chance do they stand of getting the required information for this more complex exercise? A further question refers to the variability of time scales in which data for the exercise can be collected. One could well ask whether there are sufficient fluctuations to merit collection of data on an annual basis, a proposal being advanced by the WHO for the drafting of future assessments.

It is recommended therefore to question whether it would not be more valid to use a series of different indicators from a selection of those more associated with the actual manner in which health systems are operated rather than employing one single composite indicator such as the DALE. For example, the Canadian Institute for Health Information is currently developing a proposal that would serve to evaluate the health sector, based on four separate headings, as follows: (i) Health Status; (ii) Non-medical Determinants of Health; (iii) Health System Performance; (iv) Community and Health System Characteristics. Each one of the above features is sub-divided and each sub-division is identified with a group of indicators. One problem faced by the Canadians in the development of this particular assessment strategy is the actual acquisition of data for the calculation of the proposed indicators, which shows that the monitoring of healthcare and the health services in any country indeed requires a substantial investment both in the development of the methodology as well as the generation of the data.

The Responsiveness Indicator

The idea of introducing the concept of responsiveness into an assessment of health systems is to be welcomed, since it incorporates an innovative feature, which has not been taken into account in the evaluations. It is important to take into consideration that health systems cannot be assessed without taking into account the capacity of the State to undertake its functions; the organized institutional arrangements; the political liaison between the various practitioners; and the capacity of public institutions to respond to the expectations of ordinary members of the target population concerned.

The functions of the State can be resumed as follows: to ensure macro-economic management, redistribution of income and the appropriate regulation of markets, in view of the fact that the areas which have merited attention during the reform processes regarding the public sector can be described as following three continuous paths: from State regulation to self-regulation; from vertical hierarchies to incentives de-linked from those hierarchies; and from the relationship between practitioners and institutional arrangements. Thus the reforms in the health sector in view of these presuppositions should in the event produce institutional arrangements and be orientated towards inducing health professionals, service users, government and business sectors to combine individual interests and socially oriented attitudes.

In analytical models of political science, responsiveness is often defined as the capacity of governments to arrive at decisions which bear a relationship to those that fully informed citizens would themselves take, reproducing analytic schemes of the principal-agent variety in which all citizens are the principals vis-à-vis the politicians and bureaucrats. Responsiveness in general is, in addition, closely connected to regulation and can furthermore be viewed in the context of regulatory policies. Taking into consideration the drawbacks encountered in the market (the presence of external factors, asymmetry of data and the formation of monopolies), State intervention - represented by the application of regulatory policies - is crucial for fulfilling the public functions outlined above. In this way, the capacity to attend to the expectations of its citizens (responsiveness) depends on the appropriate control of the drawbacks of government (regulatory faults), commonly arising from the asymmetry of information, the less-than-complete knowledge about the transaction costs and the administrative and political failings (Laffont & Tirole, 1994). Regulatory schemes normally combine direct and normative State regulation with the incorporation of those groups interested in the results of the policies (tripartism or multipartism) together with the different levels of delegation to the market (auto-regulation). The adaptation of regulatory policies to the characteristics of each sector of the economy and different markets may configure schemes of responsive regulation (Ayres & Brathwaite, 1996).

Responsiveness in WHR 2000 refers to aspects that are not directly linked to health. The authors of the Report take their cue from the principle that better responsiveness results from the better acceptance of health services on the part of the population and therefore it brings about better utilization of those services. This

concept corresponds to the way in which the system responds to the expectations of the population, to how people wish to be treated by the providers involved in care, preventive and health promotion services. In this way, it is a question of an adaptation and a reduction of the concept as formulated by the political sciences, which lays emphasis on only those issues related to user satisfaction as regards the service he receives from the health services. In this model, the users of the services would act as the *principals* meanwhile providers and managers would act as *agents* for the purposes of regulatory arrangements.

On the other hand, the presupposition that meeting the preferences of users constitutes a basic condition for the utilization of health services is in itself highly questionable. While it is true that people's preferences do play an important role in the demand for services, the demand model is much more complex than simple straightforward preference, and depends to a large extent on the adequate supply of services, the type and quantity of need and the social profile of the population.

The main criticism revolves around the fact that this indicator is limited to measuring the opinions of people who actually use the health services. Therefore any health service system that is used by a smaller number of people could show a high value on this indicator in spite of it being iniquitous, since those who do not have the possibility of using the services do not participate in the evaluation. Access and use of the health services are not directly measured, being considered instrumental for performance of the systems.

The WHR 2000 evaluates the level and distribution of responsiveness between the different Member Countries. This indicator deals with fairly subjective issues whose basis for comparison in different contexts and diverse cultures is questionable and, furthermore, is derived from non-representative samples. The lack of data for the construction of this indicator led the WHO to use about 50 key informants spread over 35 countries to respond to questionnaires that generated the information employed in the estimation of this indicator in the remaining countries. A total of 1791 questionnaires were completed with a marking of one to ten per question, and the results obtained were corrected by sex, government linkage and "political freedom". Based on the information thus gathered, projections were made for the other member countries. A total of 1006 questionnaires were also filled in through the Internet (half of them among WHO employees) in order to define the weighting of the various elements that comprise the responsiveness indicator.

A number of problems are observed in relation to the manner in which this indicator was estimated in WHR 2000:

- The research with the key informants should have been complementary and not central to the information obtained from representative samples of the populations involved.

- The number of questionnaires actually returned to the senders was lower than expected in countries such as Brazil (33 questionnaires).

- The questionnaire failed to take into consideration the organizational, cultural and political diversity of different countries, as well as the

differences in those countries containing a variety of systems catering for different social or religious groups.

- The analysis failed to consider political aspects (for example relations between different groups, leaderships, collegiate bodies and institutions) which make up the whole range of different expectations between countries and which are generally reflected in the local health policy agenda.

- The study underestimates the importance that should be awarded to opinion polls that, in spite of the problems known to and pointed out by the authors of WHR 2000, are not solved as the result of the methodology used.

- The WHR 2000 fails to take into consideration the importance of the medical aspects of care (diversity and complexity of supply, problem resolving capacities etc) as far as the question of meeting user expectations is concerned, and therefore with regard to the responsiveness of health systems.

The Fairness Indicator in the Contribution to the Financing of Health Systems

In the model adopted by the WHR 2000, the way health care is financed is perfectly fair when all households spend on health the same percentage of non-food expenditure, independently from their income, their state of health and their use of the health system. This approach deviates in a crucial aspect from the concept of vertical equity which presupposes that in a fair financed system the household contribution increase in proportion to the overall income level, which in effect means that the greater the household income the higher the percentage of contributions to be paid.

The indicator that measures fairness in the contribution of households to the financing of the health system was created on the basis of the percentage of the expenditure on health of households in relation to their disposable income. The disposable income was estimated using the gross household income less food expenditure. The inequalities of this contribution were calculated on the basis of the variations in the percentage of disbursements of each household in respect of the average percentage.

If the percentage expenditure on health by families is calculated using the disposable income, health systems financed with resources obtained progressively could be considered as unfair in the case of gross inequalities in income distribution.

For example, a health system in which expenditure on health impacts progressively the different income groups (Chart 1), with percentages varying from 1% to 5% of the total income, when applied to disposable income would be considered unfair,

since the lowest income group would contribute with 20% of its average disposable income whereas the highest income group would contribute with 6.52%.

Chart 1 – Percentage of contribution to the funding of the health system by household income groups according to gross and disposable income

Household Income Groups	Average Gross Income (R$)	Average expenditure on food (R$)	Average Disposable Income (R$)	% of Contribution/ Gross Income	% of Contribution/ Disposable Income
1	100,00	95,00	5,00	1%	20,00%
2	200,00	150,00	50,00	2%	8,00%
3	900,00	300,00	600,00	3%	4,50%
4	1.500,00	500,00	1.000,00	4%	6,00%
5	3.000,00	700,00	2.300,00	5%	6,52%

From the point of view of social justice, it is appropriate to use the concept of disposable income, however in this way the results obtained would be strongly influenced by the income distribution. In other words, this is not the best way to measure the health sector effort to achieve a more equitable financed system that would be able to compensate for those inequalities considered to be socially unjust.

This is one further example of incoherence between the principles set out in WHR 2000 and the methodology adopted for the evaluation of the performance of health systems, since it is affirmed in the opening paragraphs of Chapter 2 of the Report that health systems cannot be held responsible for external factors such as for example the wealth levels, or its distribution (WHO, 2000:23).

Another aspect, which needs to be questioned, is the non-utilization of other indicators of the health sector financing which would permit an assessment of health systems financing such as progressiveness or regressiveness in the allocation of resources. For example, in the case of health systems that are financed through tax receipts, it can be difficult to make changes in the way in which financing is obtained in the sense of obtaining higher equity in the financial contribution based on the health sector initiatives. Meanwhile, the allocation of financial resources as the direct responsibility of the public health sector enables one to evaluate the health sector efforts undertaken to compensate for or to attenuate those inequalities that are considered to be socially unjust.

From another point of view, as the Report itself acknowledges, the approach used in fact underestimates the inequalities in view of the fact that a low out of pocket expenditure in poor families could well be caused by the simple fact that those families not having spent anything on health due to absolute lack of money, in spite of their need to use health services. In this same sense, although it is not acknowledged by the Report, it is incorrect to use as an indicator of financial

fairness the relationship between expenditure on health and household income without making an appropriate adjustment for health needs, since health needs are distributed unequally and are greater among groups, which have lower incomes.

The data used in the report originates from research surveys related to standards of living carried out in a number of different countries. As a result, the taxes earmarked for health systems financing were not taken into account under this methodology in many countries. The case of Brazil is typical, since potentially progressive taxes which provide funds for the Ministry of Health, such as the CPMF (*Provisional Contribution on Financial Transactions*) are not taken into account by the Standard of Living Survey (1996/97) which was used as a data source. Likewise the CLLE (*Contribution on Company Net Profit*) and the COFINS (*Contribution for Social Security Funding*) cannot be measured by using household surveys. At the same time, it should be pointed out that in the case of Brazil, the data presented in Table 8 of WHR 2000, which compares expenditure on pre-paid health schemes with out of pocket cash, is unreliable because the former figures are underestimated.

It is noteworthy that, as in the case of the other indicators, the indicator referring to *Fairness of Financial Contribution* was generated predominantly on the basis of estimates. In this case, only 25 countries had data available for the calculation. The estimating strategy used, which was based upon a statistical model with three variables, is similarly questionable: the percentage of public spending on health, the Gini coefficient, and the fact of whether a country is or has been under a communist regime or not. Furthermore, although the model has a very low R^2 (0.26) this did not prevent it from being used to calculate the estimates of the remaining 170 countries.

On the WHR 2000 Measurement of Health Inequalities

The consistent evidence of persistent and increasing social inequalities in health has raised much interest on this issue in many countries. Reducing health inequalities has become a central goal in the context of health policies and development of programs to achieve a more even share of good health (Wagstaff, 2000).

Recognizing the importance of reducing the burden of illness of individuals at a socioeconomic disadvantage, the World Health Organization has adopted strategies of “health for all”, focused on the reduction in health inequalities between countries and between groups within countries by improving the level of health of disadvantaged nations and groups (WHO, 1985). The importance of this topic has been emphasized over the late years in the WHO’s policy agenda, and is now considered as one of the first priorities. The WHO’s concern in improving the health of the worse-off and reducing health inequalities is clearly established in the WHR 2000[3] “

[3] *A good health system, above all, contributes to good health. But is not always satisfactory to protect or improve the average health of the population, if at the same time inequality worsens or remains high because the gain accrues*

Under this perspective, the Report promotes the monitoring of inequalities in health, as a distinct dimension to assess the performance of health systems. However, although the existence of a great deal of discussion on measures of health inequalities in the scientific literature (Wagstaff et al., 1991; Mackenbach & Kunst, 1997), the WHO's indicator of health inequality is based uniquely on a measure proposed by Gakidou et al. (2000b), which is defined to be "variations in health status across individuals in a population". Recommending that health inequalities be assessed by measuring inter-individual differences, without regard for differential distribution of health among specific population groups, the indicator suffers from a major limitation. It is strongly affected by the extent of inequalities in socioeconomic status (SES) within the population. As a consequence, comparisons across countries and monitoring over time are prejudiced.

In addition to this conceptual critique, the WHO's measure of inequality has many other methodological problems, hidden in a very sophisticated statistical procedure, which includes the maximum likelihood estimation of the expected probability of death during childhood by an extended beta-binomial distribution. Besides the reservations about the practical utility of such a complex methodology, the indicator has no conceptual meaning and depends on the unit of measure of survival time, that is, takes different values if survival time under age two years is measured in years, months or days.

Another deficiency point is that the sources of data (Demographic Health Survey) refer to a long time ago. Not only the latest year of available data of the country surveys ranged from 1987 to 1997 but also the estimation method implies a ten-year observation, starting two years prior to the survey interview (Gakidou & King, 2000).

The methodology of estimation of the WHO's index of equality of child survival is described in GPE Discussion Paper Series: No. 18 (Gakidou and King, 2000). This paper, issued by WHO only three months after the publication of the Report, not only has mathematical mistakes and inconsistencies with the method described in the Report but also does not completely clarify the methodological procedure.

The WHO's index of health inequality is based on a measure of equality of child survival. The intention was to measure the distribution of DALE across individuals, but the analysis of the distribution of DALE in each country has not been completed for the Report (WHO, 2000: 146).

---

disproportionately to those already enjoying better health. The health system also has the responsibility to try to reduce inequalities by preferentially improving the health of the worse-off, wherever these inequalities are caused by conditions amenable to intervention. The objective of good health is really twofold: the best attainable average level – goodness – and the smallest feasible differences among individuals and groups – fairness"..

The WHO's index of equality of child survival is a measure of inter-individual differences, estimated by comparing each individual's health to every other individual's health, based on a family of health inequality measures proposed by Gakidou et al. (2000b):

$$IID(\alpha,\beta) = \frac{\sum_{i=1}^{n}\sum_{j=1}^{n} |y_i - y_j|^{\alpha}}{2n^2\mu^{\beta}}$$

where "*y_i is the health of individual i and y_j is the health of individual j, μ is the mean health of the population and n is the number of individuals in the population*" (Gakidou et al., 2000b). The parameter α changes the significance attributed to differences in health and the parameter β controls the extent to which the index is purely relative to the mean or absolute.

For the calculation of the WHO's index of equality of child survival, a complex estimation procedure was used: "*statistical methods based on maximum likelihood estimation of the extended beta-binomial distribution have been developed to distinguish between variation across mothers in the number of children who have died due to chance and that due to differences in the underlying risks of death*" (WHO, 2000: 146). Child mortality distributions have been transformed into distributions of expected survival time under age of 5 years, which have been summarized for the creation of a composite index:

$$ECS = 1 - \frac{\sum_{i=1}^{n}\sum_{j=1}^{n} |y_i - y_j|^{3}}{2n^2\mu^{0.5}},$$

where *y* is the survival time of a given child and μ is the mean survival time across children.

The detailed description of the methodological procedure used by WHO in the estimation of the ECS index is referred to two GPE discussion papers: references number 20 and 21 in the Report (WHO, 2000: 151). The first one has been available only three months after the publication of the Report, with a different title, though (Gakidou & King, 2000). The second one has not been issued yet.

Several important deficiencies in the WHO's methodological approach have been found, which refer to: inconsistencies between the GPE discussion paper and the Report; the sources of information; relevant mathematical and statistical mistakes. Besides these problems, the paper does not fully clarify the applied statistical procedures.

Among the inconsistencies between the Report and GPE discussion paper No. 18 (Gakidou and King, 2000) we mention:

- In the Report, the ECS index refers to "expected survival time under age **5** years" and, in the paper, the expected survival time under age **2** years.
- According to the WHR 2000, for the purposes of calculating the index of equality of child survival, the statistical method has been applied to Demographic and Health Survey (DHS) data and small area data from **more**

than 60 countries. According to Gakidou & King (2000), from the 191 member countries, DHS data were available for only **50** developing countries, where demographic and health surveys have been carried out.

From the methodological point of view, a number of problems have been found in the WHO's approach:

- The parameters α=3 and β=0.5 were chosen according to the preference of 1006 respondents (Gakidou et al., 2000a). This unusual way of choosing parameters of a statistical measure – according to preference to respondents and not according to the mathematical properties of the measure introduced by modification of the parameters – provided an index that depends on the unit of measurement of survival time. That is, if survival time is measured in years, months or days, the ECS index takes completely different values, including negative values. For example, as for Brazil, the ECS index equals 0.762 (WHO, 2000: Annex Table 5). Now, suppose that survival time is measured in months. Then, the ECS index for Brazil would equal (–117.7). What is the meaning of such a measure of health equality?
- It should be emphasized that, only by chance, the IID index ranges from 0 to 1 when survival time is measured in years, as recognized in the Report itself (WHO, 2000-p. 147) and not because the IID index is a relative measure. This certainly misleads the interpretation of the results presented in the Report (WHO, 2000: Annex Table 5).
- The sources of information refer to a long time ago. As stated by the authors (Gakidou and King, 2000): "*For each country we used the latest year of available data from a nationally representative DHS, ranging from 1987 to 1997".....*"*We used a ten-year observation period starting two years prior to the interview year*." So, for the 50 countries for which DHS data were available, the ECS indexes were calculated in periods of time ranging from 1975-85 to 1985-95. That is, the Report describes and compares measures of health inequalities that refer to years ranging, on the average, from 10 to 20 years ago.
- The methodology that has been applied to small area data has not been described either in the Report or in the reference papers.
- It seems that the application to small area data has been used only to validate the methodology applied to individual (family) data. As stated by Gakidou and King (2000), "*for Mexico and Brazil, the extended beta binomial model was also applied to the municipality-level mortality data sets to validate the model. The underlying assumption is that small geographical areas include mostly homogeneous populations in which the risk of death is similar*".

Regarding the latter argument, it should be pointed out that Brazil has 11 cities with more than one million population, including São Paulo and Rio de Janeiro. They are all Brazilian municipalities and are extremely heterogeneous. Spatial inequalities in health status are particularly prominent and well known (Szwarcwald et al., 2000). Recommending that it is appropriate to assess health inequalities across geographic regions, such as municipalities, with the underlying assumption of health equality within municipalities, is contradictory to all of the debate that has taken place in the recent literature (Massey, 1996). Health conditions in metropolitan areas, which frequently encompass zones ranging from wealthy to

marginal, and often pockets of poverty and slums, share peculiar social characteristics known to be highly unequal (Borrell et al., 1997).

- A final point regarding the information sources refers to the covariate adjustment method of estimation in the countries without a demographic and health survey or small area data. For these countries, the ECS index has been estimated through adjustment for covariates such as poverty, educational attainment and the level of child mortality (WHO, 2000: p. 147). The number of countries for which this approach has been used is unknown, but probably for more than 100, since DHS data were available for only 50 developing countries. On this matter, the reasoning of the choice of the covariates has not been explained. It is worth to note that none of the covariates are dispersion measures.

Among the mathematical and statistical errors, we mention:

- The equality equation for the estimation of π presented in page 6 does not hold. The second expression is a typical ratio estimate of the proportion π in cluster sampling (Cochran, 1963) but is not equal to the first summation.
- As stated by the authors (Gakidou & King, 2000), "*the probability of death, π, for each child follows a binomial distribution*" (p. 6, first paragraph). First, a probability is a parameter and does not follow a distribution. Second, the estimated π_i is supposed to follow a beta distribution, as mentioned in the fourth paragraph of the same page.

Besides all those issues, there are some important steps of the methodology that need to be clarified:

- In the entire description of the methodological approach used for the estimation of the IID index based on the DHS sample data (Gakidou & King, 2000), there is no mention of taking into account the DHS sampling design. It is well-known, and not only by statisticians, the bias introduced in sampling estimation when one does not consider the sampling weights assigned to individuals (Cochran, 1963). This means that one should weigh individuals differentially to obtain population estimates when some population subgroups have been over or under selected. Therefore, if the DHS individual probabilities of selection have not been taken into account relevant bias might have been introduced in the IID results.
- Another question refers to the utilization of the beta-binomial approximation in calculating the IID index point estimates and corresponding confidence intervals. One of the most important steps of the methodological approach is summarized in a very confusing paragraph (Gakidou & King, 2000: p.9, 4th paragraph): "*the health inequality point estimates and confidence intervals reported below are mean posterior estimates and 80% credible intervals, respectively, computed from the extended beta-binomial model with flat priors and the traditionally used asymptotic normal approximations*".
- Regarding this matter, several points remain unanswered: a) Utilization of the beta-binomial distribution to provide IID index point estimates; b) estimation of the standard error of the IID index, which is necessary to the calculation of the

confidence interval estimation; and c) the use of asymptotic normal approximations.

- Concerning the covariate adjustment (Gakidou & King, 2000: p.7 – 4th paragraph), besides the fact that there is no description of the method of adjustment, some points deserve attention.The statement of the authors: "*We included covariates for the mother's age, number of children, level of education, and average birth interval, all variables that have been shown to affect childhood survival probabilities*" is not correct. Many other variables, such as "previous sibling mortality", "mother's prenatal attendance", "geographical region of residence", "community environment", are known factors that can affect infant and childhood mortality (Palloni & Tienda, 1986).
- The adjustment for covariates is inconsistent with the authors' conception of a measure of health inequalities, which should be assessed by measuring health inter-individual differences, without adjusting a priori for covariates (Murray et al., 1999).

Now, regarding the form of the measure of health inequality in the WHR 2000, two conceptual points are critical:

- First, the assumption behind the IID index is that socioeconomic inequalities in health are a redistribution problem, since equality is achieved by raising the health status of the worse-off at the cost of diminishing the health status of the well-off (Mackenbach & Kunst, 1997). This assumption deserves more attention and should be reviewed because it contradicts the WHO's proposal, as stated in the Report (WHO, 2000: p.26): "*It is desirable to raise the average level, to reduce inequality, or both, and sometimes to judge the relative values of one and the other goal (with the difference that there is no argument for taking health away from anyone – health, unlike income or non human assets, cannot be directly redistributed*".
- Secondly, since the IID index is a measure of inter-individual differences, that is, a measure of variations in health status across individuals in a population, it depends on the distribution of the population by socioeconomic status, or other confounding factors related to health.
- Disregarding all the prominent discussion on the adequacy and validity of the individual-level measures in the assessment of health inequalities in the recent literature (Wagstaff et al., 1991), the authors (Gakidou & King, 2000) enhance the properties of the proposed family of measures {IID (α,β)}, saying that it "*encompasses or can be used to compute every popular inequality measure used in the literature and many others*...". However, all health inequality measures that are not assessed at the individual level are not particular cases of the Gakidou's family of indexes. Measures like the "slope index of inequality", the "concentration index", the "population-attributable risk" are all very popular and do no belong to Gakidou's family. Contrarily, the unique particular case of widespread use is the Gini coefficient (obtained by setting α=1 and β=1), which has been subjected to criticism because it fails to capture the hierarchical nature of the socioeconomic dimension and is affected by the extent of inequalities in socioeconomic status (SES) within the population (Wagstaff et al., 1991).
- Similarly to the Gini coefficient, the index proposed by WHO for the purpose of measuring health inequalities suffers from the same deficiencies, being critical

in some important aspects, as in the assessment of trends over time, within countries, and in the cross-country comparisons, as shown by the examples below.

The influence of the population socioeconomic inequalities on the IID index is illustrated with two simulation examples. In Table 2, the simulated population, in a time t_1, has distinct life expectancies at birth by socioeconomic groups, numerated from 1 to 5, in ascending order of SES, from the poorest to the wealthiest stratum. The distribution of the population by socioeconomic group at time t_1 is presented in the second column of Table 2. Consider that from time t_1 to time t_2, the life expectancies have shown a larger increase in the two poorest strata, of two years in the strata 1 and 2 and of one year in the other strata. Additionally, suppose that, from time t_1 to t_2, the extent of socioeconomic inequalities has increased in such a way that the population distribution by socioeconomic strata has changed, as presented in the 4th column of Table 2. Now, calculating, for times t_1 and t_2, the life expectancy mean value, the standard deviation and the IID (3, 0.5) index, one observes that, from time t_1 to t_2, both the standard deviation and the IID index have increased.

In this example, the index of health inequalities has certainly shown an increase due to the worsening of the socioeconomic inequalities in the population and not due to performance of the health system, which has had, by supposition, better performance among the poorest groups. This means that, in some cases, the IID index is more sensible to the extent of the socioeconomic inequalities in the population than to the strict performance of the health system, prejudicing cross-country comparisons as well as temporal trends monitoring.

In the second example (Table 3), we illustrate the effects of poverty concentration. Clearly, the health system in population A has the best performance. However, because the health system performance is more homogeneous in population B, although homogeneously precarious, the IID index is smaller in population B than in population A.

From the purely quantitative viewpoint, it is a matter of choice whether one should or should not take into account the distribution of the population across socioeconomic groups. In the first case, one estimates the distribution of health status in the population, without regarding the distribution of health among specific population groups. In the second case, the joint distribution of both health and socioeconomic status is considered (Manor et al., 1997). However, it should be emphasized that if one considers that what is important about health inequalities is to assess the magnitude of the inter-individual differences in health status, as the view taken by WHR 2000), the index of health inequalities will inevitably mirror the inequality in socioeconomic status.

As has been discussed by Wagstaff et al. (1991), whether the insensitive of the measure of health inequalities to the extent of the socioeconomic inequalities in the population is a defect depends clearly on the question one is seeking to answer. However, since the extent of inequalities in SES within the populations stands outside the domain of influence of public health policies and actions, this insensitivity is clearly a defect if one is aiming to evaluate the performance of the health system.

Table 2: Example of the effects of population distributions by socioeconomic status on the IID index

Socioeconomic Strata	Time t_1		Time t_2	
	Life Expectancy	Population Distribution	Life Expectancy	Population Distribution
1	60	10 %	62	15 %
2	65	15 %	67	10 %
3	68	50 %	69	50 %
4	70	15 %	71	10 %
5	71	10 %	72	15 %
Statistics	Mean = 67.35 Standard Deviation = 2.99 IID (3, 0.5) = 16.04		Mean = 68.40 Standard Deviation = 3.04 IID (3, 0.5) = 16.06	

Table 3: Example of the effects of poverty concentration on the IID index

Socioeconomic Strata	Population Distribution	Population A Life Expectancy	Population B Life Expectancy
1	60 %	58	55
2	20 %	61	55
3	15 %	63	56
4	4 %	65	60
5	1 %	66	68
Statistics		Mean = 59.71 Standard Deviation = 2.30 IID (3, 0.5) = 6.96	Mean = 55.48 Standard Deviation = 1.62 IID (3, 0.5) = 6.68

So, evaluating the performance of the health system by measuring health inequalities at the individual level, as recommended by WHO, is contradictory to the argument used in the Report itself, which recognizes that *"Health systems cannot be held responsible for influences such as the distribution of income and wealth, any more than for the impact of climate"* (WHO, 2000: 23).

The following recommendations were singled out: the relevance of using health inequality measures which would enable one to identify the determinants of health inequalities; the importance of discussion of conceptual issues, such as: a) inter-individual health differences versus social group inequalities in health; b) health redistribution problem; c) social group inequalities versus spatial health inequalities; and d) definition of social groups and classifications; the use of simpler measures and procedures, more meaningful and comprehensible for the health policy agents; the application of methods that could be reproduced in all member

countries, using information sources that are available in recent periods of time; and the necessity of WHO of financing research in the area of social classifications.

The Composite Index

The comparative assessment of health systems of the member countries is based upon five indicators: *Health Level (DALE)*, *Health Distribution*, *Responsiveness Level*, *Responsiveness Distribution* and *Fairness in financial contribution*, which when weighted respectively by 25%, 25%, 12,5%, 12,5%, *and* 25%, comprise the *Overall Health System Performance*.

The first point to be raised is that the discussion of the indicators that make up the composite index pointed to methodological limitations relevant to each of them. If each element presents serious problems it does not appear to make sense to calculate a measure based on the weighted sum of five elements which in themselves present problems.

As far as the weights attributed to each of the indicators are concerned, these were selected on the basis of research carried out by a number of different individuals, including technical staff of the WHO itself and others, who established the values to be given to each of the weightings. The authors of the WHR 2000 claim that the weights were not arbitrarily selected, but rather obtained through "consensus", with the need for only a few adjustments to be made: the weight of the DALE went from 0.24 to 0.25; that corresponding to the level of responsiveness went from 0.13 to 0.125; and the weight of fairness in the financial contribution passed from 0.22 to 0.25. They moreover affirm that variations do not exist in the choice of the weights according to the area where the professionals consulted came from, and that the assessments were equally independent of the fact of whether the professional staff was employed by the WHO or not. The authors go on to mention that the ideally the WHO member countries should be able to determine themselves the weights to be employed to arrive at the final composite index.

Nevertheless it can be observed that the composite indicator is very sensitive to alterations in the weights given to each of the separate indicators. Introducing weights that are slightly different from those used, as the ones chosen for the research exercise (0.24 for health level, 0.25 for health distribution, 0.13 for level of responsiveness, 0.16 for distribution of responsiveness, and 0.22 for fairness of social contribution), a "ranking' of the various countries is thus obtained which is completely different, with some countries moving up or down the scale by more than thirty points. This aspect is completely opposite to what is affirmed by the authors of the Report (Murray et al, 2000).

If on the one hand it is considered that the comparison of health systems performance among countries can result in stimulus to do better or, on the other hand, the employment of a classificatory index in increasing order of performance weighting (based on indicators which are in themselves defective and which becomes unstable when small alterations are made in the individual weights), is of

real value, the validity of the whole proposal becomes questionable. A further doubt is whether a purely quantitative evaluation of this nature can be applied to the health area and its many complexities grasped without it becoming transformed into a pseudo-scientific formulation. One further area in which the Report can be questioned is that of the difficulties in carrying out international comparisons in view of the wide variety of different historic, political, social and cultural situations in the different countries being compared.

Unlike with the composite index proposed by the Report (WH), attention was drawn to a number of other indices which are used on a daily basis and whose meaning is easy to grasp. One of the examples cited is the *Cost of Living Index,* which is relatively useful and actually affects the life of people through its impact on the interest rates and unemployment statistics. While the calculation of this index is moderately complex, it can in reality be interpreted easily and is understandable by the vast majority of ordinary citizens. Also cited was the *Human Development Index (HDI*), which is a composite index drawn up for over a period of 10 years and which has undergone a series of modifications over the time of its existence. It was asserted that the HDI is composed of three primary indices, all of which are consistent and easy to grasp: the *per capita* Gross Domestic Product (GDP), the illiteracy rate and the figure relating to Life Expectancy at Birth. In contrast to the indicators which make up the *Overall Health System Performance,* these are indicators which are available for the majority of countries and are drawn up on the basis of standardized, validated procedures which have been used and revised by experts form many different organizations and countries.

It was considered that the employment of one single indicator to orientate policies aimed at health systems seemed to be somewhat unrealistic. Also questioned was the fact that the WHO had relegated under the present evaluation method the twelve indicators which the WHO itself had put forward in the 1970s, when the targets included in *Health for All by the Year 2000* and the *Alma Ata* Document were mapped out. A number of countries deployed this initial group in thirty eight indicators, covering a range of different spheres such as: final targets (improvement of health conditions), intermediate targets (lifestyle), and conditional aims (support for the formulation of health policies).

International and Transcultural Comparisons

The health systems performance model of the WHR 2000 is firmly adherent to a radical methodological individualism based on an abstract universal individual, out of context and disembodied. From this point of view, the social order would become the exclusive result of individual acts and would need to be explained as such. Nevertheless, criticism of this point of view should not lead to the type of structuralism which would in effect annul the individual characteristics of people since there are more complex solutions which bypass reductionism or the dichotomy methodological individualism versus structuralism.

Human societies are organized in groups. Women, minorities, ethnic groupings, people with different racial characteristics demonstrate that the universal and

abstract individual does not exist, and that innumerable social inequalities including those in the area of health are effects of those cultural, gender, ethnic etc inequalities.

The WHR 2000 offers no suitable methodological solutions to ensure comparability according to inequalities of a diverse type and takes up the idea of the "new universalism", the concept of the universal individual, abstract and disembodied, who previously in the public sphere was the citizen and who now is represented by the figure of the client/consumer – a description applied indiscriminately to all individuals.

In transcultural comparisons, it is vital to differentiate individuals as persons from individual as a historic category who emerged as the axis of modern western society, since the "historic individual" personifies the basic values of modern western societies and individualism itself. These questions have all been examined in the sociological literature. Dumont (1966 and 1977) for example refers to traditional and modern symbolic universes (*Hommo Aequalis* on the values of modern, egalitarian and individualistic societies, and *Hommo Hierarchicus* on the traditional, holistic, hierarchical societies such as India). Lukes (1983) draws attention to the principles of individualism respecting human dignity, privacy, autonomy and self-development. The idea of responsiveness discussed by the WHR 2000 is based on these principles in a western context. One question that needs to be asked is whether all these various principles are actually universally valid.

The problem of linking specific contexts to general categories is part of the dilemma between universalism and relativism, where the heart of the question is whether it is possible to establish some degree of commensurability between different social and cultural systems.

How can one therefore go from the level of analysis of particular cases to that of generalization, commensurability and comparison? Qualitative approaches can contribute in this sense once they have managed to grasp the cultural significances and the specific contexts. All in all, in view of the fact that qualitative analyses are usually contextually-referred interpretations, would it be possible to establish some kind of generalization which goes beyond the case under examination?

Generalizations are of a contextual order and their aim is to understand the meaning of phenomena and no only measuring them. When a particular case is studied, the first task is to obtain the data that will serve as a base for the understanding and theorize upon certain processes. It is not always the case that the concepts used in a given situation can be applied to other different contexts. Nor is it always possible to apply the same concepts to a variety of different situations.

A second problem arises in respect of the classifications. To put different societies or "civilizations" into a hierarchical list over a *continuum* of development has been a major issue in western social science. Since the 19th Century, evolutionists, positivists and functionalists adopted the custom of comparing societies according to different criteria and theories, attributing to different peoples and "civilizations" a

specified pace on the scale of evolution. At the apex of this scale stays the Western civilization.

Given that qualitative data relates to a subjective dimension referring to certain contexts or situations, this should in fact constitute a complementary element to the information assembled by other methodologies, as for example by polls or inquiries. Even when discussing the merits of qualitative analyses, those that are normally considered more consistent and reliable are generally anchored in various types of collected evidence. In wider research studies, it is important to obtain points of convergence between data collected independently and that assembled through a series of different means (method triangulation).

It would be important to get beyond the impasses presented by relativism versus universalism, the qualitative versus quantitative and to build up a body of knowledge which embraces the experiences and the needs of different groups and social categories - and a body above all capable of generating knowledge which can be compared and generalized.

Comparative studies are viable and should be pursued, providing the variables associated to ethnic and cultural features are duly controlled in order to ensure comparability and generalization. Interpreted social dynamic comprises certain characteristics such as the dissemination of individual and universal values, also affirmed in classic theories by means of approaches based on extra-individual principles such as those that occur in the writings of Kant, Marx and Weber, or those expressed through universal values such as human rights, freedom and democracy.

WHR 2000 however was not particularly successful in respect of the comparison of health systems the world over, since it does not take into account the need to be articulate the transcultural differences between peoples and differing assembled principles.

The proposal for 2001

Available information would indicate that the methodology to be applied to the evaluation of health systems performance in 2001 would differ little from that used in WHR 2000. The only difference will be the adoption of a common questionnaire to be applied in all member countries in order to gather the information needed for the calculation of the composite index. This questionnaire contains a series of questions necessary for the assembling of the five indicators, which make up the composite index.

Obtaining population-based data in the member countries was considered to be major initiative since this method aims at substituting that involving key informants and the highly questionable estimates which were employed in WHR 2000 for the calculation of the indicators.

Nevertheless, it was considered that the questionnaire as presented is not ready to be applied in the different member countries. The questionnaire in addition

contains a series of somewhat subjective questions and the comparability of the responses obtained in different contexts could thus be compromised.

On the other hand, it was made clear that the response to the questionnaire would take up a great deal of time, a fact which could well lead to a high refusal level among the recipients. A further aspect that could increase the refusal rate is related to the more private questions that it is planned to ask, such as those concerning illegal drugs taking, among others, which would be incompatible with a questionnaire in which the respondent has to identify himself by name, as proposed by the World Health Organization.

Finally, attention was drawn to the high costs involved in the application of an instrument of this type in representative samples of large populations countries with regional differences.

General Observations

- It would seem apparent that the World Health Organization is in the process of assuming the advocacy of a number of specific health sector reform models which were previously predicated by the World Bank, as part of a wider agenda of changes in social and health policy. With the publication of WHR 2000, the WHO began to signal the terms of the political and ideological debate in world health policy and to induce the application of a distinctive reform agenda.

- The employment of a single indicator (the *Overall Health System Performance*) to guide policies aimed at health systems appears to have been excessively reductionist. The emphasis which the WHR 2000 places on composite indicators leads in the opposite direction to recent scientific developments and to the predominant trends in academic thinking – nowadays there exists a powerful convergence of thought regarding the need to disaggregate indicators and to make them more informative and the product of more accurate measurements. The World Health Organization went the opposite way by building a composite, synthetic index, which has no real meaning and fails to deliver useful information about health systems performance.

- One of the key criticisms of the WHR 2000 is the validity of the *Overall Health System Performance* as a measure of effectiveness of health systems, since it fails surprisingly to include any indicator referring to the actual use of the health services – a basic piece of data, which would reflect the question of access to the services. There is no scientific evidence presented which would show what changes in the health status, whether in terms of its media or in its distribution, in given societies is mainly a reflection of the way in which the health systems actually operate. In fact the health status is highly influenced by social and economic conditions of different societies.

- The performance index (*Overall Health System Performance)* does not permit an identification of the main problems faced by the health services in different Member Countries. Thus, the WHR 2000 fails to make any progress in the direction of defining valid parameters for the monitoring of the development of the health system in each country and, even less, for the formulation of international comparisons.

- The WHR 2000 offers no suitable methodological solutions to ensure comparability for inequalities prevailing in different cultural contexts and takes up the concept of "new universalism" which embraces the idea of the universal individual, abstract and disembodied who used to be the citizen in the public sphere and who is now represented by the figure of the client/consumer, a description which is applied indiscriminately and equally to all individuals.

- Using the DALE in the *Overall Health System Performance* index presents a number of key problems: the DALE has not the adequate sensibility and specificity to be a good indicator of the performance of health systems; it is a difficult-to-measure indicator (the calculations involved require a very large number of procedures which are difficult to operate). The way it was estimated in the WHR 2000 produced similar results to the ones that would be obtained by simply using the traditional life expectancy at birth, without taking into account the peculiarities of the country morbidities.

- The assessment was carried out on the basis of a significant absence of data, since only five of the 191 Member Countries of the organization were in possession of all the information necessary to calculate the five indicators, among them Brazil. The precariousness of the data presented and the methodological weakness of the assessment undermine the results that emerge from the exercise and cast a shadow over a political and theoretical debate which could be useful for the development of health systems in the Member Countries.

In summary, it is recommended that the World Health Organization should encourage the convening of a series of meetings with the wide participation of the scientific community and representatives of the Member Countries of the organization with the stated aim of examining in critical detail the methodology which is being commended, as well as the exact manner in which this methodology is formulated. In this way, it is to be hoped that it would be possible to assemble a scientifically more consistent product and above all one that would be of greater use for the improvement of health systems both from the standpoint of impact and equity.

******

References

ALMEIDA CM (1995). *As Reformas Sanitárias nos Anos 80: Crise ou Transição?*. Tese de Doutorado, Escola Nacional de Saúde Pública, Fundação Oswaldo Cruz, Rio de Janeiro, mimeo.

ALMEIDA CM (1999). Reforma de Estado e reforma de sistemas de saúde: experiências internacionais e tendências de mudança. *Ciência e Saúde Coletiva* 4(2):263-286.

AYRES I & BRAITHWAITE J (1992). *Responsive Regulation: transcending the deregulation debate***.** Oxford: Oxford University Press.

BORÓN A (1995). Democracia e reforma social na América Latina: reflexões a propósito da experiência européia. In: Bóron,A. *Estado, Capitalismo e Democracia na América Latina,* Rio de Janeiro:Paz e Terra.

BORRELL C, PLASENCIA A, PASARIN I & ORTUN V (1997). Widening social inequalities in mortality: the case of Barcelona, a southern European city. *Journal of Epidemiology and Community Health*, 51: 659-667.

BUSTELLO E (1994). Hood Robin: Ajuste Fiscal e Eqüidade na América Latina. *Planejamento e Políticas Públicas* 11(jun/dez):4-48.

COCHRAN WG (1963). *Sampling Techniques*. New York, Wiley.

DUMONT L (1966). *Hommo Hierarchicus.* Paris:Gallimar.

DUMONT L (1977). *Hommo Aequalis.* Paris:Gallimar.

ECLAC (1990). *Transformación Productiva con Equidad - La tarea prioritaria del desarrollo de América Latina y el Caribe en los años noventa*. Santiago de Chile:Naciones Unidas/Cepal.

ECLAC (1993). *Panorama Social de America Latina*. Santiago, Chile.

EVANS D (2000). Ethics and resource allocation [Workbook 6, session 2.17] in:*Evidence for Health Policy: Burden of disease, cost-effectiveness and health systems*. World Health Organization, sep.

FEACHEM RGA (1999). Health Systems: more evidence, more debate. *Bulletin of the World Health Organization – The International Journal of Public Health* 78(6):715.

FRENK J. *et al* (1994). Dimensions of health system reform. *Health Policy* 27:19-34.

GAKIDOU EE & KING G (2000). *An individual-level approach to health inequality: child survival in 50 countries*. World Health Organization, Geneva (GPE Discussion Paper No. 18).

GAKIDOU EE, FRENK J & MURRAY CJL (2000a). *Measuring preferences on health system performance assessment*. World Health Organization, Geneva (GPE Discussion Paper No. 20).

GAKIDOU EE, MURRAY CJL & FRENK J (2000b). Defining and measuring health inequality: an approach based on the distribution of health expectancy. *Bulletin of the World Health Organization*, 78: 42-54.

HOEVEN, R. van der & STEWART, F (1993). Social development during periods of structural adjustment in Latin America. *International Labour Office - Occasional Paper 18* (mimeo).

KAUFMAN, R. (1995). The Politics of State Reform: A Review of the Theorethical Approaches (mimeo, 33 pp.).

KETTL D (1996). *The Global Revolution: Reforming Government Sector Management*. Paper presented at the International Seminar "A Reforma do Estado na América Latina e Caribe - Rumo a uma administração Pública Gerencial. Ministério da Administração Federal e Reforma do Estado" -MARE, sponsored by IADB and UN. Brasília, 16-17, 1996 (mimeo).

LAFFONT J & TIROLE J (1994) *Theory of Incentives in Procurement and Regulation***.** Cambridge, MA: MIT Press.

LONDOÑO JL & FRENK J (1995). Structured Pluralism: Towards a New Model for Health System Reform in Latin America. World Bank, Technical Department for Latin America and the Caribbean, Washington, D.C.

LONDOÑO JL (1996). Estructurando Pluralismo en los Servicios de Salud: La Experiencia Colombiana. *Revista de Análisis Económico* 11(2):37-60.

LUKES S (1983). *Individualism.* Londres:Basil-Blackwell.

MACKENBACH JP & KUNST AE (1997). Measuring the magnitude of socio-economic inequalities in health: an overview of available measures illustrated with two examples from Europe. *Social Science and Medicine*, 44: 757-771.

MANOR O, MATTHEWS S AND POWER C (1997). Comparing measures of health inequality. *Social Science and Medicine*, 45: 761-771.

MASSEY DS (1996). The age of extremes: concentrated affluence and poverty in the twenty-first century. *Demography*, 33(4): 395-412.

MORRISON GC (1997). HYE (healthy years equivalents) and TTO (time trade-off): what is the difference? *J Health Econ*. 16(5):563-78.

MURRAY CJL & FRENK J (1999). A framework for assessing the performance of health systems. *Bulletin of the World Health Organization – The International Journal of Public Health* 78(6):717-731.

MURRAY CJL & LOPEZ AD (1996a). Rethinking DALYs. In: MURRAY CJL & LOPEZ AD - *The Global Burden of Disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020.* Cambridge, MA, Harvard University Press.

MURRAY CJL & LOPEZ AD (1996b). Global and Regional Descriptive Epidemiology of Disability: Incidence, Prevalence, Health Expectances and Years Lived with Disability In: MURRAY CJL & LOPEZ AD*. The Global Burden of Disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020*. Cambridge, MA, Harvard University Press.

MURRAY CJL, GAKIDOU EE AND FRENK J (1999). Health inequalities and social group differences: What should we measure? *Bulletin of the World Health Organization*, 77: 537-543.

MURRAY CJL; LAUER J; TANDON A; FRENK J (2000). *Overall health system achievement for 191 countries*. Geneva, World Health Organization, [GPE Discussion Paper no. 28]

MUSGROVE P (1995). Cost-effectiveness and the socialization of health care. *Health Policy*, 32:111-123.

MUSGROVE P (1996). Public and Private Roles in Health: Theory and Financing. World Bank (no prelo) (cópia mimeo).

NAVARRO V (2000). Assessment of the World Health Report 2000. Lancet, 356 (2941):1598-1601.

OPAS (1995). Gasto Nacional y Financiamiento del Sector de la Salud en América Latina y el Caribe: Desafíos para la Década de los Noventa. Washington, DC:OPAS/OMS.

OPAS/CEPAL (1994). Salud, equidad y transformación productiva en América Latina y Caribe. *Serie Documentos Reproducidos* N.41, Washington, DC:OPAS.

PALLONI A & TIENDA A (1986). The effects of breastfeeding and pace of childbearing on mortality at early ages. *Demography*, 23(1): 31-52.

SZWARCWALD, C. L., BASTOS, F. I., BARCELLOS, C., PINA, M. F., ESTEVES, M. A. P. Health conditions and residential concentration of poverty: a study in Rio de Janeiro, Brazil. *Journal Of Epidemiology And Community Health*, 54(7): 530-536.

van DOORSLAER E, WAGSTAFF A (1993). Equity in the finance of health care: methods and findings. In: Van Doorslaer E, Wagstaff A & Rutten : *Equity in the finance and delivery of health care: an international perspective*.: Oxford University Press, pp. 20-48.

WAGSTAFF A (2000). Socioeconomic inequalities in child mortality: comparisons across nine developing countries. *Bulletin of the World Health Organization*, 78: 19-29.

WAGSTAFF A, PACI P & van DOORSLAER E (1991). On the measurement of inequalities in health. *Social Science and Medicine*, 33: 545-557.

WHITEHEAD M (1990). *The Concepts and Principles of Equity and Health*. World Health Organization, Copenhagen.

WORLD BANK (1989). El financiamiento de los servicios de salud en los paises en desarrollo. Una agenda para la reforma. In: Economia de la Salud - Perspectivas para la America Latina*, Publicacion Cientifica No. 517*. Washington, DC: OPAS/OMS.

WORLD BANK (1993). *World Development Report: Investing in Health.* Washington,DC: World Bank.

WORLD HEALTH ORGANIZATION (1985).*Targets for health for all.* Copenhagen, WHO.

WORLD HEALTH ORGANIZATION (2000).*The World Health Report 2000*, Geneva

******

This report was prepared by the following participants:

Angela Jourdan Gadelha
Alicia Ugá
Célia Almeida
Célia Landmann Szwarcwald
Cláudia Travassos
Francisco Viacava
Jeni Vaitsman
Joaquim Valente
José Mendes Ribeiro
Silvia Porto

WORKSHOP "PERFORMANCE OF HEALTH SYSTEMS:***THE WORLD HEALTH REPORT 2000"***

Rio de Janeiro, 14-15 December 2000

Participants

Alícia Ugá	ENSP/Fundação Oswaldo Cruz	Brasil
Americo Miglionico		Uruguay
Angela Jourdan	ENSP - Fundação Oswaldo Cruz	Brasil
Anthony Robbins	Tufts University	USA
Célia Almeida	ENSP - Fundação Oswaldo Cruz	Brasil
Célia L Szwarcwald	CICT - Fundação Oswaldo Cruz	Brasil
Cid Manso Vianna	Universidade Estadual do Rio de Janeiro	Brasil
Cláudia Travassos	CICT- Fundação Oswaldo Cruz	Brasil
Cláudio Salm	Ministério da Saúde	Brasil
Elba Cristina L. Rêgo	Ministério da Saúde	Brasil
Francisco Viacava	CICT-Fundação Oswaldo Cruz	Brasil
Jarbas Barbosa da Silva Jr	CENEPI - FUNASA	Brasil
Jeni Vaitsman	ENSP - Fundação Oswaldo Cruz	Brasil
João Yunes	Fac de Saúde Pública da USP	Brasil
Joaquim Valente	ENSP - Fundação Oswaldo Cruz	Brasil
John Millar	Health Canada	Canada
José da Rocha Carvalheiro	Sec Estadual Saúde de S Paulo	Brasil
José Marcos Nogueira Viana	Ministério da Saúde	Brasil
José Mendes Ribeiro	ENSP - Fundação Oswaldo Cruz	Brasil
José Carvalho de Noronha	Associação Brasileira de Saúde Coletiva - ABRASCO	Brasil
Malcolm Segall	University of Sussex	UK
Maria H Dutilh Novaes	Fac Medicina USP	Brasil
Marilisa Barros	Fac Ciências Médicas - UNICAMP	Brasil
Nilson do Rosário Costa	ENSP - Fundação Oswaldo Cruz	Brasil
Paula Braveman	University of California	USA
Paulo Marchiori Buss	ENSP - Fundação Oswaldo Cruz	Brasil
Sergio Piola	IPEA	Brasil
Silvia Porto	ENSP - Fundação Oswaldo Cruz	Brasil
Vicente Ortún	Universitat Pompeu Fabra	Spain