Monitoring Millennium Development Goals in Brazilian municipalities: challenges to be met in facing up to iniquities

Monitorando Objetivos de Desenvolvimento do Milênio em municípios brasileiros: desafios ao enfrentamento das iniquidades

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Abstract

The Healthy Cities and Agenda 21 programs improve living and health conditions and affect social and economic determinants of health. The Millennium Development Goals (MDG) indicators can be used to assess the impact of social agendas. A data search was carried out for the period 1997 to 2006 to obtain 48 indicators proposed by the United Nations and a further 74 proposed by the technical group for the MDGin Brazil. There is a scarcity of studies concerned with assessing the MDG at the municipal level. Data from Brazilian health information systems are not always consistent or accurate for municipalities. The lack of availability and reliable data led to the substitution of some indicators. The information systems did not always provide annual data; national household surveys could not be disaggregated at the municipal level and there were also modifications on conceptual definitions over time. As a result, the project created an alternative list with 29 indicators. MDG monitoring at the local community can be important to measure the performance of actions toward improvements in quality of life and social iniquities.

Equity in Health; Social Indicators; Millennium Development Goals; Local Development; Health Status Indicators

Introduction

The United Nations (UN) held a summit meeting in the year 2000 to draw up an ambitious agenda to diminish global social iniquities by 2015 [1]. A total of 189 countries accepted undertaking the so-called Millennium Development Goals (MDG). The proposal was to monitor important dimensions of life presented in terms of eight goals expressed as actions to fight poverty and hunger, promote education and sexual equality, improve health status and access to sanitation and housing, and enhance sustainable development and integration. These goals were divided into 18 targets, to be monitored using 48 indicators.

The World Health Organization (WHO) and the World Bank organized and held discussion forums with political leaders to speed up the paths to achieve the health MDG. The first was held in Geneva, Switzerland, in January 2004; the second in Nigeria in the same year and the third in France in November 2005. The 47th Directing Council report of the Pan-American Health Organization saw health investments as a central issue in this new development agenda [2], suggesting then the strategic importance of the health sector for countries' political agendas (http://www.paho.org/spanish/gov/cd/cd47index-s.htm, accessed on 09/Jun/2010).

Brazil is one of the signatories of the UN document and, by Presidential decree (31/Oct/2003), created a Technical Group to accompa-

ny the MDG. Information was systematically collected for the surveillance of the MDG. The Planning and Strategic Investment Department of the Brazilian Ministry of Planning (Secretaria de Planejamento e Investimentos Estratégicos, Ministério do Planejamento – SPI/MP) coordinated the studies and the Institute of Applied Economic Research (Instituto de Pesquisa Econômica Aplicada– IPEA) was responsible for the agenda [2,3].

There was also a major movement towards improving the mechanisms to evaluate living and health conditions. The main focus of this initiative was the questioning of the adequacy of the use of strictly economic indicators to represent the population's quality of life. The discussion of the limitations of using Gross Domestic Product (GDP) per capita for this purpose is well-known [4].

The Human Development Index (HDI) was already employed worldwide. This Index was anchored on the theoretical formulations of important thinkers, among them Sen [4] and his discussion of the freedom of choice. The HDI is a synthetic indicator comprised of three elements: longevity, expressed by life expectancy at birth, understood as the synthesis of a set of indicators of health conditions (child mortality, maternal mortality, access to drinking water, garbage collection, sewage systems etc.) [5]; education, which aggregates two indicators: the literacy rate of individuals 15 years of age and over, and the combined gross rate of schooling of the three teaching levels [5]; and the income dimension, measured by the GDP per capita, which expresses the conditions necessary for the maintenance of a dignified life, and people's access to opportunities and economic resources (occupation, employment, income, technologies, credit, land and others) [5].

The Sarkozy Committee, established in 2008, released its final report in 2010 and presented substantial reflections on how to improve instruments for measuring quality of life. This report recommended that in order to measure quality of life, it is also necessary to take into account people's opportunities and the freedom to choose among them [6].

Many initiatives have been taken to adjust measures and to monitor the population's living conditions and health status, throughout the world: it is worth making special mention of the initiatives taken by multilateral organs – the UN Development Programme (UNDP), the UN Children' Fund (UNICEF), WHO, the World Bank, the Joint UN Programme on HIV/AIDS (UNIAIDS) and the UN Development Fund for Women (UNIFEM). Some mechanisms have been built to improve precise diagnoses of social situations, to guide political decisions and the empowerment of the population in Brazil over the last 20 years. Some examples are: the Annual Human Development Report, the Municipal Human Development Index (M-HDI), the Atlas of Human Development (http://www.pnud.org.br/atlas), the Map of Social Inclusion/Exclusion in São Paulo (http://www.dpi.inpe.br/geopro/exclusao/mapas.html), the Hunger Map (http://www.dpi.inpe.br/geopro/exclusao/mapas.html). Synthetic indicators were also generated in this period, such as the São Paulo Social Responsibility Index – IPRS (http://www.seade.gov.br/projetos/iprs/) – and the Map of Environmental Injustice (http://www.conflitoambiental.icict.fiocruz.br/), among others.

Inter-Agency Health Information Network (Rede Interagencial de Informação para a Saúde – RIPSA; http://www.ripsa.org.br) – aimed to improve and to consolidate information systems and databases in order to define and to obtain a set of indicators to evaluate Brazilian health status and health services. The RIPSA is constituted by important institutions that are information generators, such as the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística – IBGE), the Brazilian Ministry of Health (Ministério da Saúde), IPEA and the Oswaldo Cruz Foundation (Fundação Oswaldo Cruz – Fiocruz), João Pinheiro Foundation (Fundação João Pinheiro), Josué de Castro Foundation (Fundação Josué de Castro), São Paulo Data Analysis System Foundation (Fundação Sistema Estadual de Análise de Dados – SEADE). RIPSA also counts on the participation of universities, the Brazilian Public Health Association (Associação Brasileira de Pós-graduação em Saúde Coletiva – ABRASCO) and the Brazilian Population Studies (Associação Brasileira de Empresas de Pesquisa – ABEP). There were also academic and non-governmental organizations initiatives to study particular aspects of life in society.

There are, however, well established methodologies to evaluate the impact of MDG at the national level, even in countries with incomplete datasets, while studies directed to evaluate the impact in small administrative units are scarce. This is mainly due to the incompleteness of the data necessary to obtain MDG indicators at this level.

The Multi-Center study coordinated by the School of Public Health of the São Paulo University (Faculdade de Saúde Pública, Universidade São Paulo), with the participation of the Paraná Catholic University (Pontífica Universidade Católica do Paraná), Goiás Federal University (Universidade Federal de Goiás), Dom Bosco Catholic University (Universidade Católica Dom

Bosco), Pernambuco Federal University (Universidade Federal de Pernambuco), Amazônia University (Universidade da Amazônia), Tocantis Federal University (Universidade Federal do Tocantis), had the objective of assessing how social agendas – Healthy Cities, Agenda 21 and Sustainable Integrated Local Development (DLIS) – contributed towards achieving the MDG, in municipalities of the five geographical regions of the country. This objective was based on the assumption that social agendas will act through the social determinants of health. The project found great difficulties to obtain and to monitor MDG indicators at the municipal level [2].

The social agendas stimulated by both multinational and Brazilian organizations were understood as opportunities for social development. Social agendas can have a structural effect, as when they are implemented they become integrated into society. Social agendas could also be a means of approximation to the principles of Health Promotion, like inter-sector, multistrategic approaches, sustainability/continuity of actions, equity, holistic concepts, social empowerment and participation, as defined by the WHO [7]. The local development promoted by social agendas is believed to contribute to the improvement of the quality of life and health status, as it clearly affects the social and economic determinants of health.

Many difficulties arose in the process of evaluating the role of social agendas in achieving the MDG. Brazilian health information systems showed a large list of datasets, and although there is available data at the municipal level, these data are not always consistent or accurate to obtain indicators for health and living conditions.

The aim of this article is to describe the process of defining and building MDG indicators at the municipal level in Brazil. This paper presents the difficulties found and the efforts to overcome them, as a partial result of the investigative process, trusting that these considerations will contribute to monitoring MDG in Brazilian municipalities

Methods

The selection of the municipalities came from a universe of 5,561 municipalities, after stratifying by country region, unit of the federation, and population size. A previous confirmation of data availability from the national databases to obtain MDG indicators was carried out.

Those Brazilian municipalities which have undertaken one or more experiences with social agendas in the 1990s were investigated in three project phases, which used both quantitative and qualitative methods. The first phase was a telephone and document search to identify the municipalities with the minimum requirements to develop the research. The second phase was to evaluate the impact of social agendas on population living conditions and health status. The municipalities were divided into a group with social agenda and another group without it. The third phase, a qualitative study, was carried out to evaluate the advances of social development, especially those related to participative actions, accountability and sustainability of the processes implemented [2].

The first research step identified 105 municipalities which presented active social agendas, documented for at least 3 years in 2007. Another 175 municipalities, without social agenda experience were also selected.

The municipalities which did not have necessary data to build the selected indicators were not eliminated from the sample. We understood that this was an important sign of the extreme regional diversity and inequity. The period of analysis was between 1997 and 2006, and the data had to be available annually.

The starting-point was the search for the necessary data to obtain the 48 indicators proposed by the UN, as well as those 74 indicators proposed by the Brazilian technical group for the follow-up of the MDG [3]. The first step was to find data on national databases, demographic censuses and national statistical agency surveys.

After this step, bibliography and specialists of several areas were consulted: SEADE Foundation, ABEP, IBGE, IPEADATA, the Brazilian Ministry of Labor and Employment (Ministério do Trabalho e Emprego – MTE), the Brazilian Ministry of Social Development (Ministério do Desenvolvimento Social e Combate à Fome – MDS), and the Cities, Exchequer, Communications and Education (Sistema de Estatísticas Educacionais – EDUDATA) Departments of the Federal Government; Health Informatics Department (Departamento de Informática do SUS – DATASUS), the National Telecommunications Agency (Agência Nacional de Telecomunicaçãoes – Anatel), the Supreme Election Court, RIPSA, and non-governmental organizations like Women in Power, among others.

To evaluate non-existing data, experts and references were consulted again, in order to redefine and replace indicators, preserving the conceptual guidelines established for the 18 Targets and eight MDG. Each new list of indicators was discussed in three seminars and seven phone conferences – with the research team of all university institutions involved and statisticians.

Results

The study began with the elaboration of a list of indicators defined by the study of the Brazilian Follow-up Report on the MDG [3] which accepted the UN indicators and added some others that are appropriate to the national situation, according to information availability.

It became immediately evident that a large part of the indicators were available only at the national or regional level, and that databases were not consistent at the municipal level, as the project demanded. A phase of exclusion of indicators took place, for which there were three reasons.

First, the indicators were based on national databases which, although existing at the municipal level, were published at a longer time interval than the one required by the research project. This was the case of the data from the demographic censuses, which are published only at ten-year intervals. The comparisons that are possible with data collected only every ten years were not considered to be acceptable.

Second, the indicators obtained from the database of the *Brazilian National Household Sample Survey* (PNAD) presented some problems: (a) the PNAD sampling plan is built for geographical regions, metropolitan areas and states, and it was impossible to re-calculate the data for municipalities; (b) although this survey is annual, there are some modifications of its conceptual definitions over time, which does not enable the use of these data for the project.

Third, indicators and data produced ad hoc by government agencies to assess executive diagnoses and the elaboration of government plans were also rejected. These reports presented information without continuity, or they were not available annually or did not cover the study period (environmental data from the Environment Department, information on digital exclusion, access to a household or mobile telephone among others).

A shorter second list of indicators was obtained due to the lack of available information or because they could not be disaggregated at the municipal level. This was the case of data from household surveys like PNAD. On the other hand, the data available from estimates were not suitable for the purposes of the project.

Once these decisions had been taken and the role of possible indicators had been reduced, the research team proceeded with the effort to obtain the necessary data for the indicators selected. At this point, new rejections and replacements occurred because of the non-continuity of data collection in the period of reference of the study. Six indicators which had been judged appropriate for the project were excluded as they did not meet these criteria and they were not available annually. They were: (a) percentage of per capita Household Income below US$ 141 (June 2010); (b) percentage of municipal population with per capita household income of less than half the minimum wage, which had replaced the indicator – proportion of the population below the national poverty line; (c) percentage of municipal population with per capita household income less than a quarter of the minimum wage, which had replaced the indicator – evolution of extreme poverty by region; (d) municipal per capita GDP; (e) ratio between the literacy rates of women and men of 15 to 24 years of age, which had replaced the indicator – ratio of literate women to men in the 15 to 24 age group; and, (f) proportion of the working population who contributed to the Social Welfare System.

The reason for the exclusion of these three previous indicators was the lack of annual datasets, for the study period. The availability was possible only based on demographic census estimates. It was decided that data based on estimated figures could produce bias in attempts to link the results to the behavior of other indicators and did not justify their adoption. That was the reason for discarding the following indicators, as explained below: the Municipal GDP, the literacy ratio, and the proportion of the working population who contributed to the Social Welfare Scheme.

The initial adoption of the Municipal GDP indicator was an attempt to measure MDG 1 indirectly – eradicate extreme poverty and hunger – because it was impossible to find any direct measures of this indicator at the municipal level. However, when this indicator was submitted to the project's economic advisors, this procedure was discouraged due to: the lack of a historical series, successive methodological changes having been made in the past to calculate the GDP and the uncertainty of the accuracy of the available data.

The attempt to replace the literate men and women ratio by the literacy ratio was fruitless. Neither of the indicators could be calculated due to the lack of annual figures which would cover the whole period. The data available came from research projects based on multi-annual samplings, which did not allow for information to be obtained at the municipal level (PNAD).

To add other indicators to MDG 4 - reduce child mortality – and MDG 5 – improve maternal health – some procedures were necessary. There are no official figures for the infant mortality ratio (IMR) at the municipal level obtained annually. To overcome this absence, the project decided

to employ two indicators as a measure of infant mortality: proportional mortality under 1 year of age and IMR. In the municipalities with less than 50,000 inhabitants, which were located in states where RIPSA obtains the IMR from direct calculation, data from the mortality and live-births information systems were employed, as was a three year moving average, to overcome the possible fluctuation of IMR due to small numbers. Where municipalities had less than 50,000 inhabitants and were located in states in which RIPSA employs estimated data of IMR, the state IMR value was employed, assuming that if the state does not present good quality of information this will also be true for small municipalities. For municipalities with 50,000 inhabitants and over, IMR was calculated directly.

For maternal mortality rates (MMR), it was even more difficult to obtain precise results at the municipal level. To overcome this difficulty this indicator was obtained in two ways: (a) for municipalities located in states where RIPSA obtains maternal mortality, Mortality Information System (SIM) and Information System on Live Births (SINASC) data were employed to obtain MMR. In those municipalities located in States in which RIPSA does not calculate or estimate the MMR, the number of maternal deaths was obtained and the correction factor of 1.4 [8] was also applied. The final MMR was obtained applying the moving average for three years. Another indicator was also employed – the percentage of institutional deliveries – in order to assure a more consistent MDG 5 – improvement of maternal health.

Thus, a temporary table of 27 indicators was reached – as the indicator of MDG 3, Promoting gender equality and empowerment of women, Target 4, ratio of girls and boys in basic, intermediate and higher education, was subdivided into three: the ratio in basic education, the ratio in intermediate education and the ratio in higher education (EDUDATA. http://www.edudatabrasil.inep.gov.br/, accessed on 22/Jan/2009).

Other methodological actions were implemented: two other indicators were added to permit the measurement of Target 1 of MDG 1 – eradicate extreme poverty and hunger: the percentage of families who benefited from the Brazilian Income Transfer Program (PBF) and Municipal Revenue from Taxes and Constitutional and Legal Transfers per capita. The PBF is a compensatory policy for the provision of income to families with per capita income below the poverty line.

Finally, thirty indicators were reached, which, submitted to a descriptive statistical study, were reduced to 29, due to the lack of consistency of the information presented by the percentage of the population served by the sewage system indicator, which limited the representation of MDG 7 – ensure environmental sustainability – to one single indicator. The final table of indicators is presented in Table 1.

Discussion

Although Brazilian reports [3] adopted the UN's proposals, some changes were carried out in order to adapt them to evaluate the national context. Some indicators were also introduced to represent the social, economic and political characteristics of Brazil. The selection of indicators was done to carry out an evaluation at the national level, and it was not intended to take into account the peculiar situation of the municipalities, especially regarding information availability at the level of the municipal administration.

Further, while indicators such as access to basic education and equity between genders presented improvements, it is evident that indicators such as the eradication of extreme poverty, reduction of maternal mortality and protection of the environment, when seen concretely on the basis of the country's existing data, present poor performances. As regards the promotion of equity between genders, the number of girls enrolled in schools exceeds that of boys, but regarding the gender composition of the work force, discrimination still persists [3].

The UNICEF Report on the Map of the Social Situation in the Semi-Arid Northeastern Region showed that infant deaths in rich areas are rare, but there is large regional inequality. In this region, 95% of localities have infant mortality rates higher than the national average of 36.1 per 1,000 live-births in 1998 [9]. The Brazilian maternal mortality rate estimated was of 74.5 per 100,000 live-births in 1998 [9]. There is a long path to attain the target of 28.5 per 100,000 live-births; and equally distant are the targets of MDG 6, on the fight against HIV/AIDS and other infectious diseases.

Beyond these already well-known regional inequalities there is a need to obtain consistent information to monitor adequately the concrete local situation, in which people live, work, pass their days and relate to each other. This depends on the availability of an historical series of indicators, not arising from forecasts and already available data, as a condition for the effective monitoring of the fulfillment of the targets and objectives of the Millennium in municipalities, in our case, which have developed social agendas for local development, such as Agenda 21 and Healthy Cities.

Table 1

List of indicators for the Millennium Development Goals (MDG).

MDG	Final designation of the Indicator
1	01. Percentage of children under one year with protein/caloric undernourishment
	02. Percentage of children aged between 1 and 2 years with protein/caloric undernourishment
	03. Percentage of families benefited by the PBF
	04. Municipal per capita revenue from taxes and constitutional and legal transfers
2	05. Median age at conclusion of primary education
	06. Percentage of children aged from 7 to 14 years enrolled in primary education
	07. School drop-out rate in the 1st grade of primary education
	08. Age-grade distortion in the 4th grade of primary education
	09. Age-grade distortion in the 8th grade of primary education
3	10. Gender ratio of pupils enrolled in primary education
	11. Gender ratio of pupils enrolled in secondary education
	12. Gender ratio of pupils enrolled in higher education
	13. Percentage of salaried women in the non-agricultural sector
	14. Percentage of lady town councilors
	15. Percentage of women among federal deputies elected by the state
	16. Male/female ratio among salaried workers
4	17. Proportional mortality of children under 1 year of age
	18. Coefficient of Infant Mortality by moving average
5	19. Maternal mortality ratio corrected by moving average
	20. Percentage of institutional deliveries
	21. Proportion of coverage of pregnancies with 7 or more prenatal visits
6	22. HIV Mortality Coefficient
	23. Malaria prevalence
	24. Tuberculosis prevalence (confirmed cases)
	25. Mortality from diarrhea in children under 5 years
	26. Cardiovascular disease death rate
	27. Mortality rates due to external causes
7	28. Percentage of the population with piped water supply
8	29. Percentage of salaried youth between 15 and 24 years

PBF: Brazilian Income Transfer Program.

Some databases provide good data to obtain MDG indicators at the national, regional or state level, but there are difficulties to obtain available data at the municipal level. Identifying these difficulties and the decisions to overcome them can contribute to studies in which the unit of analysis is the small community and the quality of information of national databases still needs improvement.

Some considerations are needed over the adjustments carried out, to overcome the difficulties of data availability and collection. There is a great effort directed toward the implementation and maintenance of national databases in the country. However, this effort is not recent, it also requires consolidation and regularity, in view of the vastness of the Brazilian national territory and the social inequality among the regions and the areas with a greater or lesser degree of urbanization.

These considerations are especially true for the national vital statistics databases. Brazilian vital statistics information systems still face problems to capture all vital events, mainly in small and poorest areas of the country. Vital events (live births and deaths) are often under registered in the North and Northeast Region of the country [10]. Techniques to overcome the problems of incomplete databases can be applied to the national or state level [10], but are not useful to obtain estimates of small population areas. RIPSA [10] disseminates IMR for all the units of the Federation, after assessing the quality of the data collected. In accordance with its assessment, each year RIPSA decides whether the IMR will be calculated directly, employing the data

from the mortality and live births information systems, or obtained indirectly using estimates, based on Census and PNAD data [10]. There were two types of limitations to obtain MDG mortality indicators: (a) the under-registration of live births and infant deaths will result in underestimating or distorting the infant mortality rate; (b) the quality of the cause of death registered in death certificates will affect the identification of maternal deaths [10]. Andrade et al. [11] and Frias et al. [12] identified problems in the information on deaths and live-births, especially in municipalities of less than 50,000 inhabitants. Laurenti et al. [8] elaborated, a correction factor which is applied to the national level to obtain maternal mortality rates. This adjustment factor is the result of a sampling study of the quality of filling out death certificates, on the basis of the Ramos investigation technique.

There are no official figures of IMR at the municipal level obtained annually. To overcome this absence, the project decided to employ two indicators as a measure of infant mortality: proportional mortality under one year of age and IMR obtained in two ways as described before. Although, proportional mortality under one year does not estimate the probability of death, in time series data it can indicate if there is a trend of reduction of relative weight of deaths under one year over time and together with the calculated IMR could express the trend of IMR of the municipalities studied. This procedure to obtain data from different sources and employing more than one indicator is similar to that adopted by Rajaratanam et al. [13] in the evaluation of IMR and under five mortality trends to overcome difficulties to find available and reliable data. It was even more difficult to obtain precise results for maternal mortality rates at the municipal level. Areas presenting under reporting of deaths usually also present a large proportion of ill identified causes of deaths [11], hampering the identification of maternal deaths [11]. Although RIPSA does not estimate MMR for some states [10], this indicator was obtained for all municipalities as already described. The correction factor of 1.4 for incompleteness and misclassification of maternal deaths is applied to national Brazilian figures estimated by RIPSA [10]. This correction factor is very close to that applied by WHO (1.5) [14]. There is a concern that applying the same correction factor to all municipalities can result in distortions, mainly in those municipalities which carry out maternal death investigations and have already corrected maternal deaths. This correction factor can also underestimate maternal mortality where delivery conditions are very poor. To overcome this difficulty, another indicator was employed: percentage of institutional deliveries. This indicator does not measure maternal mortality, but can indirectly evaluate access to delivery care, assuming that the access to delivery care is an important component of maternal mortality. Hogan et al. [15] also applied another indicator to estimate maternal deaths, such as qualified delivery care and delivery in medical institutions to complete information to evaluate the trend of maternal mortality in 181 countries.

The absence or the poor quality of databases at the municipal level led to enormous difficulties in carrying out the project. This was its main difficulty. A great number of MDG indicators were impossible to obtain or needed to be replaced. Of the 48 indicators proposed by the UN and the 74 added by the Brazilian technical group, only 14 fulfilled such demands and were finally included in the table of 29 indicators employed in this research project.

Brazilian information systems produce a great deal of data, but the discontinuity of data collection from year to year, the lack of frequent evaluation of data collection, and methodological discontinuity, including changes in variable definitions, make it difficult to obtain time series indicators. On the other hand, it is impossible to obtain indicators at the municipal level from data produced by the sampling surveys and the unsuitability of employing projected variables or indicators for this research.

MDG are tools which are reasonably applied to monitoring countries and their regions. We still need to develop mechanisms which are suitable to follow up local/municipal health and living conditions, with a special emphasis on those tools needed to identify iniquitous situations. Regarding the insufficiency of data to follow-up inequalities, Reidpath et al. [16] expressed concern that large contingents in iniquitous situations may not be benefited by the targets achieved, even when their country or territorial unit has attained them.

Conclusions

Better coverage of the municipalities of national databases and in the sampling plans of the national surveys, surveys with shorter regularity and the use of mechanisms such as compound indexes seem to be necessary so that the quest to attain the targets of the MDG, in search of equity and provided with efficient tools for the monitoring of the indicators, would spell a real opportunity for the enhancement of the quality of life for all social and geographical segments of the country.

Resumo

Cidades Saudáveis e Agenda 21 aprimoram condições de vida e saúde e afetam os determinantes sociais e econômicos da saúde. Indicadores dos Objetivos de Desenvolvimento do Milênio (ODM) podem ser usados para monitorar o impacto das agendas sociais. Buscaram-se dados de 1997 a 2006 para se obter 48 indicadores propostos pelas Nações Unidas e 74 propostos no 3º Relatório Brasileiro de Acompanhamento dos ODM. Estudos para monitorar ODM em localidades são escassos. Sistemas de informação de saúde apresentam amplo espectro de dados, mas dados municipais nem sempre são consistentes ou precisos. Indicadores foram substituídos devido a sua indisponibilidade ou por resultados não confiáveis. Sistemas nacionais nem sempre disponibilizam dados anuais, pesquisa amostrais não permitem desagregação no nível municipal, e ocorrem mudanças conceituais ao longo do tempo. Como resultado, obteve-se lista alternativa de 29 indicadores. Monitoramento local de ODM pode dimensionar o desempenho de ações destinadas a aprimorar a qualidade de vida e para a redução de iniquidades sociais.

Equidade em Saúde; Indicadores Sociais; Objetivos de Desenvolvimento do Milênio; Desenvolvimento Local; Indicadores Básicos de Saúde

Contributors

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