Collection Review





Monitoring and Evaluating Progress towards Universal Health Coverage in Brazil

Mauricio L. Barreto^{1,2*}, Davide Rasella^{1,2}, Daiane B. Machado¹, Rosana Aquino^{1,2}, Diana Lima^{1,2}, Leila P. Garcia³, Alexandra C. Boing⁴, Jackson Santos¹, Juan Escalante⁵, Estela M. L. Aquino¹, Claudia Travassos⁶

1 Instituto de Saúde Coletiva, Federal University of Bahia, Salvador, Brazil, 2 National Institute in Science, Technology and Innovation in Health (CITECS), Salvador, Brazil, 3 Instituto de Pesquisa Econômica Aplicada, Brazilia, Brazil, 4 Federal University of Santa Catarina, Floranopólis, Brazil, 5 Secretaria de Vigilância a Saúde, Ministry of Health, Brasília, Brazil, 6 Instituto de Comunicação e Informação Científica e Tecnológica em Saúde (ICICT)/FIOCRUZ, Rio de Janeiro, Brazil

This paper is part of the PLOS Universal Health Coverage Collection. This is the summary of the Brazil country case study. The full paper is available as Supporting Information file Text S1.

Background

Brazil is a large and heterogeneous country, which has undergone rapid economic and social improvements, including changes in major social determinants of health and in the organization of the health system [1,2]. Universal health coverage (UHC) is a fundamental principle of the Brazilian Unified Health System (SUS) targeted to implement the constitutional right (established by the Constitution of 1988) to health for all Brazilian citizens.

Universal Health Coverage: The Policy Context

Since 1988, Brazil has been making efforts to develop the SUS, aiming at providing comprehensive and universal care, at the preventive and curative level, through decentralized management and provision of health services. The SUS provides care at the primary, secondary, and tertiary levels, and promotes community participation. However, the Brazilian health system includes an intricate public-private mix, and approximately one-quarter of the Brazilian population (the wealthiest sector) is covered by private health plans [1].

Monitoring and Evaluation for UHC

The SUS has made advances in decentralized management processes, involving intermanagerial committees and negotiation mechanisms between federal, state, and municipal stakeholders for decision making on different managerial and funding aspects. The country has adopted a model of monitoring and evaluation (M&E) linked to the guidelines of the National Health Plan (NHP) to support the implementation of priority health policies [3].

Serious efforts have been made to improve the coverage and quality of the national health databases, including the intensive

Collection Review articles synthesize in narrative form the best available evidence on a topic. Submission of Collection Review articles is by invitation only, and they are only published as part of a PLOS Collection as agreed in advance by the PLOS Medicine Editors.

use of information technologies [4]. The expanded access and improved quality and coverage of these databases have resulted in their increased use, including for academic research [5–10].

In order to analyze the evolution of selected indicators during the final years in this study we adopted a specific framework (see Text S1) that included social determinants of health and risk factors, access to the three levels of the health system (primary, secondary, and tertiary), relevant health outcomes, private insurance, and household expenditures.

Progress towards UHC in Brazil

Social determinants of health and risk factors. There has been a large improvement in important health determinants over the past 25 years, with the major changes occurring in less developed municipalities. Between 1991 and 2010, poverty and illiteracy rates decreased significantly, while access to water, electricity, and sanitation have increased, with an observed general reduction of inequalities between municipalities. In the same period smoking prevalence has decreased, while obesity has increased in the Brazilian population.

Primary health care. All primary health care (PHC)-related activities have improved in Brazil in the last decade, with coverage of the chief strategy, the Family Health Programme (FHP), greatly increasing and reaching more than 50% of the population. The increase was larger in less developed municipalities, with low coverage maintained in the more developed municipalities (Figure 1).

Citation: Barreto ML, Rasella D, Machado DB, Aquino R, Lima D, et al. (2014) Monitoring and Evaluating Progress towards Universal Health Coverage in Brazil. PLoS Med 11(9): e1001692. doi:10.1371/journal.pmed.1001692

Published September 22, 2014

Copyright: © 2014 Barreto et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Funding: No funding was received for this work.

Competing Interests: The authors have declared that no competing interests exist.

Abbreviations: FHP, Family Health Programme; PHC, primary health care; SUS, Brazilian Unified Health System; UHC, universal health coverage.

* E-mail: mauricio@ufba.br

1

Provenance: Not commissioned; part of a Collection; externally peer reviewed

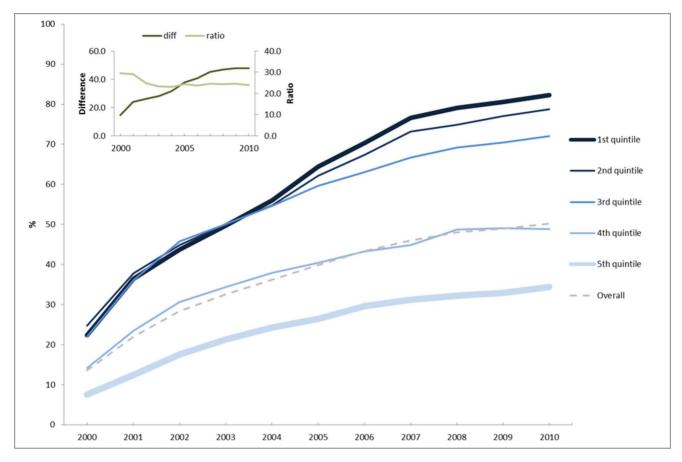


Figure 1. Average family health program coverage according to the municipal human development index (HDI-M) quintiles of the 5,507 Brazilian municipalities (data from the Primary Care Information System - SIAB [11]). The graph inset reflects the absolute differences and ratios between the FHP coverage of the poorest and richest quintiles. doi:10.1371/journal.pmed.1001692.g001

Secondary health care. The percentage of hospital births in Brazil reached 91.8% in 2011, with the largest increase among less developed municipalities. The number of cesarean deliveries also increased, and the inequality measures among the selected indicators suggest a slight, and sometimes mixed, reduction in inequalities in secondary care.

Tertiary health care. Rates of hospital admission for cardiovascular surgery increased slightly from 2008 to 2011, but the large differences between more and less developed municipalities remained unchanged. Similar trends were observed in hemodialysis and the number of kidney transplants, suggesting a global maintenance of inequality in tertiary care.

Private insurance and health expenditures. The percentage of individuals ranging in age from 30 to 59 years who have private health insurance is close to 30%, reaching over 50% among wealthier individuals. Health expenditures in relation to the capacity to pay are higher but decreasing in the poorest quintiles of the population, and catastrophic health expenditures are minimal but still present, particularly in middle-income households.

Health outcomes. Under-five mortality has greatly decreased in recent years, mainly in less developed municipalities, thereby reducing inequalities (Figure 2). There were significant increases in the percentage of individuals who reported a diagnosis

of hypertension or diabetes, suggesting increasing access to health care.

Conclusions and Recommendations

The SUS has guaranteed access to free health care for the population over the last 25 years. Overall, UHC has increased at all levels of care, with some important positive trends toward equity.

PHC, in particular through the expansion of the FHP, has succeeded in guaranteeing equitable coverage. FHP has demonstrated a high effectiveness and a synergistic effect with the national conditional cash transfer program (BFP) [5–9]. The final outcome was a marked reduction of inequalities in PHC access and utilization [10]; however, inequalities persist in secondary and tertiary care.

The chronic underfunding of the system imposes serious limitations on the overall expansion of the SUS, particularly at the secondary and tertiary levels [1]. In addition to ensuring adequate and sustained funding for the SUS, initiatives require support to increase access in all levels of care, and to improve the management of health services. Finally, continued monitoring of UHC indicators is recommended, with the goal of subsidizing policies to promote greater equity in health care provision and in the decrease of health determinants and risks.

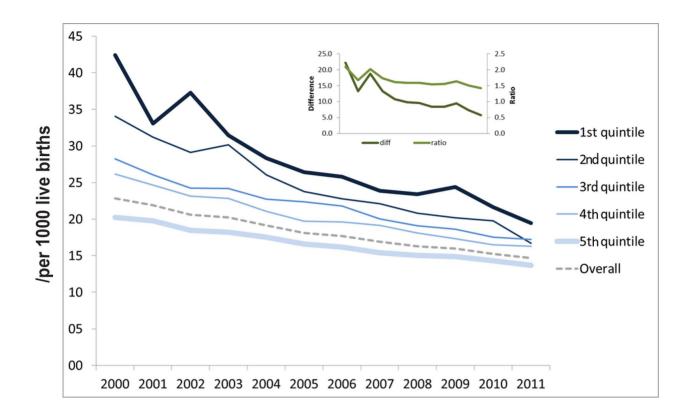


Figure 2. Under-five mortality rates according to municipal human development index (HDI-M) quintiles of the 5,507 Brazilian municipalities (Data from the Mortality Information System – SIM [12]). The graph inset reflects the absolute differences and ratios between the U5MRs of the poorest and richest quintiles. doi:10.1371/journal.pmed.1001692.g002

Supporting Information

Text S1 The full country case study for Brazil. (DOCX)

Author Contributions

Analyzed the data: MLB DR DBM RA DL LPG ACB JS JE EMLA CT. Wrote the first draft of the manuscript: MLB DR RA LPG ACB CT.

References

- Paim J, Travassos C, Almeida C, Bahia L, Macinko J (2011) The Brazilian health system: history, advances, and challenges. Lancet 377: 1778–1797.
- IPEA. Instituto de Pesquisa Econômica Aplicada (IPEA) (2012) A década inclusiva (2001–2011): desigualdade, pobreza e políticas de renda. Rio de Janeiro: IPEA.
- Costa H (2005) Plano nacional de saúde. Un pacto pela la saúde no Brasil. Available: http://dtr2004.saude.gov.br/susdeaz/pns/arquivo/Plano_Nacional_de_Saude.pdf. Accessed 22 November 2013.
- Ministério da Saúde, Datasus (2013) Available: http://www2.datasus.gov.br/ DATASUS/index.php. Accessed 22 November 2013.
- Aquino R, de Oliveira NF, Barreto ML (2009) Impact of the family health program on infant mortality in Brazilian municipalities. Am J Public Health 99: 87-93
- Rasella D, Aquino R, Barreto ML (2010) Reducing childhood mortality from diarrhea and lower respiratory tract infections in Brazil. Pediatrics 126: e534– e540.

Contributed to the writing of the manuscript: MLB DR DBM RA DL LPG ACB JS JE EMLA CT. ICMJE criteria for authorship read and met: MLB DR DBM RA DL LPG ACB JS JE EMLA CT. Agree with manuscript results and conclusions: MLB DR DBM RA DL LPG ACB JS JE EMLA CT. Conception, design, data interpretation, drafting, revising, and final approval of the version to be published: MLB.

- Dourado I, Oliveira VB, Aquino R, Bonolo P, Lima-Costa MF, et al. (2011)
 Trends in primary health care-sensitive conditions in Brazil: the role of the
 Family Health Program (Project ICSAP-Brazil). Med Care 49: 577–584.
- Rasella D, Aquino R, Santos CA, Paes-Sousa R, Barreto ML (2013) Effect of a conditional cash transfer programme on childhood mortality: a nationwide analysis of Brazilian municipalities. Lancet 382: 57–64.
- Guanais FC (2013) The combined effects of the expansion of primary health care and conditional cash transfers on infant mortality in Brazil, 1998–2010.
 Am J Public Health 103: 2000–2006.
- Macinko J, Lima-Costa MF (2012) Horizontal equity in health care utilization in Brazil, 1998–2008. Int J Equity Health 11: 33.
- 11. Ministério da Saúde (2014) Available: http://www2.datasus.gov.br/SIAB/index.php?area = 01. Accessed 22 November 2013.
- Ministério da Saúde (2014) Available: http://www2.datasus.gov.br/ DATASUS/index.php?area = 0205. Accessed 22 November 2013.