

# Progress in a land of extremes

Although Brazil has made important progress towards removing inequality, **Frederico C Guanais** finds much is still to be done

When Brazil emerged from nearly 20 years of military dictatorship in 1988 it was a very unequal society: the wealthiest 10% of Brazilians held 49.5% of the national income; the poorest 10% were left with just 0.7%. One of the pillars of redemocratisation was a new federal constitution that for the first time in Brazilian history obliged the state to provide universal and equitable access to health services. An integrated health system was established, coordinating health services at all levels of government, following principles of decentralisation, and giving priority to prevention.

Today, the unified health system (known as SUS) offers comprehensive coverage to all, but it is mostly used by people on lower incomes. Despite the achievements of the past two decades, gradients in health status and access to health services persist along the lines of income, educational background, race, and region.<sup>1 2</sup> This article considers progress and continued challenges towards health equity in Brazil.

## State of the nation

Brazil has 185.7 million residents, 84% of whom live in urban areas. Between 1990 and 2009, poverty rates fell from 41.9% to 21.4% but 40 million people are still considered to be poor, and 13 million people extremely poor.<sup>3</sup> Major

challenges still lie ahead: in 2009, the national household sampling survey found that 40% of households are not connected to a sewage network and 10% of the adult population are illiterate.<sup>4</sup>

Health outcomes have improved, but sizeable disparities persist. Ministry of Health data show that state averages for postneonatal mortality ranged from 6.0 to 40.1 in 1997 and from 2.9 to 14.7 in 2007.<sup>5</sup> Moreover, Brazil's current demographic and epidemiological transition further threatens equity, particularly with the rise of risk factors for chronic non-communicable diseases.

## Introduction of unified health system

Before the military coup in 1964 Brazil had a social health insurance system that provided cover for a minority of employed workers but excluded most citizens, with the poor relying on intermittent provision by charities. Under the military dictatorship, the health system moved further in the direction of a private model.<sup>6</sup> During the 1970s, gross domestic product grew at up to 14% a year but income inequality rose and public social investment was ignored in favour of macroeconomic growth.

However, the thrust for democratisation and social rights grew in the 1980s. In 1986 the first civilian president for two decades took office, and the blueprints for a tax financed universal health system were drafted during the eighth national health conference. This conference was the first to include broad participation from academia, civil society, social movements, and activists. Motivated by the democratic transition, nearly 5000 participants reached a consensus over the proposal for a unified public health system. The decisions of the conference were incorporated in the 1988 constitution, leading to the creation of the unified health system (SUS).

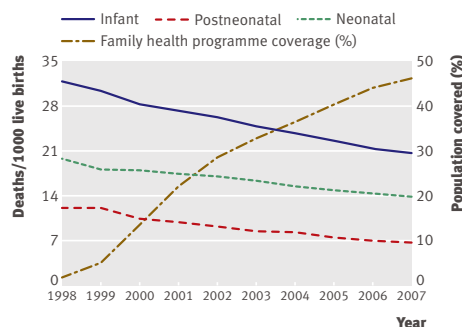
The goals of SUS are to promote knowledge of health determinants; to reduce the risk of disease and create universal and equitable access



to services; and to provide integrated curative and preventive health services. Its funding depends on a complex mechanism in which federal, state, and municipal revenues from taxes and intergovernmental transfers are allocated to health, social security, and social protection.

SUS provides universal coverage, free of charge. The public network encompasses health facilities that are run by federal, state, and municipal governments, as well as contracted private and non-profit institutions. In 2009, SUS paid for 11.5 million hospital admissions to 6003 hospitals, of which 48.9% were government institutions, 22.7% were private, and 28.4% were non-profit.<sup>5</sup> However, in 2008, 20% of the population, mostly in the upper fifth of the income distribution, had additional health insurance plans for private healthcare.<sup>7</sup>

Brazilian law imposes no restrictions on types of medical services to be provided by SUS, based on the view of health as a human right. Anyone can walk into a public clinic or a hospital seeking free treatment. Costly treatments such as highly active antiretroviral therapy for HIV infection are free of charge. However, waiting for specialised care, surgery, and emergency care is common.<sup>8</sup> There is no explicit prioritisation of the types of treatment provided,<sup>9</sup> and lawsuits by wealthier citizens seeking free provision of cutting edge drugs therefore have the potential to increase health inequity.<sup>10</sup>



Population coverage by family health programme (FHP) and infant mortality (data from Brazilian Ministry of Health)



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### Primary care

Although the 1988 constitution introduced a radical institutional change in the Brazilian health system, implementation of this change was more incremental. In the early 1990s, initiatives in family oriented, community based primary care gained prominence, eventually leading to the reorientation of the system towards a primary care led model.<sup>11</sup>

In 1991, the Ministry of Health introduced the community health agents programme, in an effort to reach underserved communities that had been excluded under the previous health model. This led to the creation of the family health programme in 1994. The programme uses teams of family health professionals assigned to geographical areas that encompass 3500 people each. The typical family health team includes a physician, a nurse, a medical assistant, a social worker, and several locally hired community health workers. The programme is funded through federal transfers that vary according to levels of population coverage, and these resources are complemented by local government allocations. It focuses heavily on prevention and management of diseases, but it also serves a mechanism for continuity of care through referrals to other levels of care.

In 2009, 95.6 million people (52% of the population) were served by the family health programme. Out of this total, 73.9 million lived in urban areas and 21.7 million lived in rural

### Vimicius Lima, 6, plays in the Jardim Edite favela in Sao Paulo, Brazil

areas, which represents a coverage of 47% for urban areas and 73% for rural areas. Coverage is highest in the poorer northeastern region, reaching 72%, and lowest in the wealthier southeastern region, with only 36% coverage, suggesting that the programme has worked best where it is most needed.<sup>12</sup>

Figure 1 shows that infant mortality fell as the proportion of the population covered by the programme expanded from 1998 to 2007. Between 1998 and 2006 the national infant mortality rate fell from 35.0 to 15.3 deaths per 1000 live births, and the maximum state average fell from 39.9 in 1998 to 17.0 in 2006.<sup>13</sup> Other studies have associated the expansion of the programme with improvements in children's health outcomes, access to services, and reductions in hospital admissions for chronic diseases in females.<sup>14 15</sup>

Questions have been raised about whether the family health programme reduced the impetus of universalism by having a stronger presence in rural and poorer regions, or whether the focus on the poor turns the programme into a form of selective primary care.<sup>16</sup> Nevertheless, there seems to be a consensus that it has been important for successful implementation of SUS and has improved access to health services among the poor.<sup>17 18</sup>

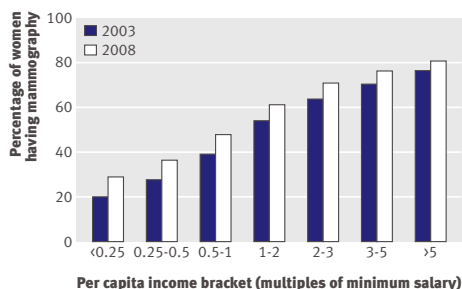
### Combining public health with social protection

National social protection programmes that focus on poor populations have also been credited with important gains in health equity over the past decade. During 1995-2002, attempts were made to use conditional cash transfers to increase school enrolment and reduce malnutrition. However, Morris and colleagues found that the scheme resulted in a reduction in the rate of weight gain in preschool children and speculated that mothers may have kept their children malnourished so that they could remain in the programme.<sup>19</sup>

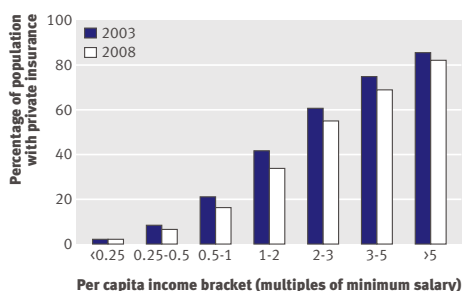
The beginning of President Lula's administration in January 2003 was marked by high expectations in terms of equity enhancing policies.<sup>20</sup> Under the slogan of Zero Hunger, the new government introduced another form of cash transfer, in which the funds were supposed to be spent only on healthy foods. However, after problems with implementation and criticism that money was not reaching vulnerable people, in 2003 the Lula administration decided to merge all conditional cash transfers into a single programme. It eased restrictions on how beneficiaries spent the money, renewed monitoring of compliance with conditions for receipt, and unified all registries of beneficiaries into a single database, rebranding the strategy as *Bolsa Familia* programme.<sup>21</sup>

*Bolsa Familia* currently benefits about 60 million people. Under the programme all families with a monthly income per capita up to 140 reais (£52; €61; \$83) are eligible to receive a monthly cash benefit varying from 22 to 200 reais. Continuous payment of the benefits is conditional on compliance with a basic health and education agenda. All children under 17 years old in the participating households must attend school, with a minimum attendance of 85%. Children must receive all immunisations included in the official schedule and attend growth monitoring appointments up to the age of 7 years, and pregnant or breastfeeding women must attend all scheduled prenatal and postnatal care visits.

Given the universalist tradition espoused by many health professionals and academics in Brazil, the targeting mechanism intrinsic to the design of *Bolsa Familia* is controversial.<sup>22</sup> However, the compulsory health and education services are provided by the state for the whole population. In a sense, demand for health and education services is "forced" by the use of



**Fig 2 | Proportion of women aged ≥25 who have ever had mammography according to per capita family income, 2003 and 2008<sup>28</sup>**



**Fig 3 | Proportion of population with private health insurance according to per capita family income<sup>28</sup>**

financial incentives. Rigorous evaluation of the programme has been scarce, but, consistent with international evidence,<sup>23</sup> it seems to be associated with improvements in child health and use of health services.<sup>24</sup>

Although it is difficult to disentangle the effects of SUS and social programmes on health equity, several studies point to positive overall effects. Barros and colleagues argue that active health policy and socioeconomic progress have improved the health of children and mothers in Brazil.<sup>25</sup> Health inequities, indicated by the prevalence of stunting, fell sharply from 1996 to 2007.<sup>26</sup> It has also been suggested that reduction in poverty from 1985 to 2004 in Brazil can be credited more to advances in social policy than to economic growth.<sup>27</sup>

### Universalism

Despite the progress that has been achieved towards health equity in the past decade, access to health services still correlates with family income. For example, in 2008, the proportion of women aged 25 or older who had ever had mammography was 29% in the lowest bracket of family income and 81% in the highest bracket (fig 2).<sup>28</sup> The figure shows that an equitable health system is still a distant goal, but the changes from 2003 to 2008 confirm that larger improve-



**The other side of healthcare: Cataract surgery, Recife, Brazil**

ments have taken place where they are needed the most.

Similarly, 2008 data show that 83% of the population with a monthly per capita family income more than five times the minimum salary (510 reais in 2010) had additional health insurance and opted out of the public health system whenever possible. Meanwhile, only 2% of the people with monthly per capita family income less than a quarter of the minimum salary had additional insurance (fig 3).

Because all services provided by SUS are free of charge to the user, health insurance in Brazil is required only for private healthcare. The gradient in health insurance purchases is similar in the surveys conducted in 2003 and 2008, but it seems that the proportion of people purchasing insurance is slowly falling, especially in middle income brackets (fig 3). People may be opting out of private health insurance because they cannot afford it or because their income is not high enough to qualify for the full tax breaks offered to the traditional middle and upper classes, which amount to almost a third of the payments to private providers. Alternatively, this “new middle class,” which includes people who have overcome poverty, has a more positive view of the universal health system than the more traditional middle class. If true, this could

mean that progress is being made towards universalism.

Two examples of health programmes that have been both universal and equitable are HIV therapy and the immunisation programme. The AIDS programme within SUS combines universal free access to highly active antiretroviral treatment with prevention campaigns.<sup>29</sup> Since most private insurance providers would not cover the high cost of the antiretroviral drugs, even the middle and upper classes resorted to the public system, which responded effectively. The immunisation programme has also successfully reached broad coverage among all income brackets.

The health and social policies that have generated most of the improvements in health and reductions in poverty after 1988 were the ones that reached the poor first. But as the disparities are progressively reduced, the equity gains from programmes directed at the poor will be correspondingly smaller. More than an ideal, universalism may be a necessity to maintain the level of progress in the years to come.

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**Contributors and sources:** FG worked as a public manager in the Brazilian federal government from 1998 to 2010, and has worked in the cabinet of the Ministry of Social Development and Fight against Hunger. He has published papers on the effect of primary healthcare programmes on adult and child health. The findings, interpretations, and conclusions do not necessarily reflect the view of the Inter-American Development Bank or the Brazilian government.

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## CORRECTIONS AND CLARIFICATIONS

### Disparities in breast cancer mortality trends between 30 European countries: retrospective trend analysis of WHO mortality database

In this Pico version of the research paper by Philippe Autier and colleagues (*BMJ* 2010;341:c3620, print publication 14 August, p 335) the third author's name should be spelt Carlo La Vecchia (not LaVecchia).

### Endgames: Relative risks and statistical significance

In this statistical question by Philip Sedgwick and Louise Marston (*BMJ* 2010;341:c4265, print publication 14 August, p 351) a second "not" was missing from option b, which should have read: "Alternative hypothesis: in the population of children with acute respiratory tract infection, the risk of antibiotic resistance at two weeks in children prescribed antibiotics does not equal that of children not prescribed antibiotics."

### Designing prevention programmes to reduce incidence of dementia: prospective cohort study of modifiable risk factors

In this research article by K Ritchie and colleagues (*BMJ* 2010;341:c3885, print publication 14 August, p 336) the adult reading test used was wrongly described as the Neale adult reading test. The authors confirm that they in fact used the national adult reading test.

### Editor's Choice. Rosiglitazone: a cautionary tale

In this Editor's Choice by Fiona Godlee, published in the 11 September issue, we mixed up some dates in the third paragraph (*BMJ* 2010;341:c4896). The UK's Committee on Human Medicines advised the Medicines and Healthcare Products Regulatory Agency in July (not August, as we stated) that the risks of rosiglitazone outweighed the benefits and that it had no place on the UK market. And, similarly, it was in July (not August) that doctors received a letter suggesting that they seek alternatives to rosiglitazone.

### Can user charges make health care more efficient?

We had considerable difficulty with the names of the authors of this article by Thomson and colleagues (*BMJ* 2010;c3759, print publication 4 September, pp 487-9). We misspelt the first author as Thompson in Editor's Choice, and we misspelt Foubister in the contents pages and the article's standfirst, and Elias in the contents pages.

### Ectopic pregnancy

In this Practice article by Sheikh Al-Jabri and colleagues (*BMJ* 2010;341:c3770, print publication 14 August pp 344-5), the authors confirm that they made errors in the references. Reference 8 in the reference list was wrong and should not have been cited. The third paragraph of the "investigations" section (in which reference 8 was cited) should have been referenced as follows (note that the numbering here does not relate to the published numbering):

"In primary care, transvaginal ultrasound may not be readily available and transabdominal ultrasound is considered a useful screening test for early pregnancy complications, with a sensitivity of 80% and specificity of 78%.<sup>1</sup> Finding an intrauterine gestation on abdominal scan effectively excludes the possibility of an ectopic pregnancy. However, ultrasound diagnosis should be made by visualising an adnexal mass rather than the absence of intrauterine sac only.<sup>2</sup> For more definitive diagnosis, the sensitivity of transvaginal ultrasound to diagnose tubal ectopic pregnancy is 90.9% and the specificity is 99.9%.<sup>2\*</sup>

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