A revolution in primary healthcare

Brazil saw one of the fastest recorded falls in infant mortality after it established a national health service. But as the country's emergent middle class bails out of the public system, **Tom Hennigan** finds its poorest citizens are again at risk

During a difficult first pregnancy there was no public healthcare system in Brazil to look after Maria Isabel Laurenço, who was instead forced to rely on an overstretched and underfunded charitable hospital.

"I'd had problems throughout the pregnancy but no prenatal care. At nine months I was suffering real pain, but when I went to the hospital they just gave me a cup of milk with a lot of salt in it because they said I had low blood pressure. Then they sent me home." Shortly afterwards she fainted. "I woke up five days later to be told my daughter had been born. All this because of the milk they gave me. And to this day I still suffer from high blood pressure." She believes that a mistake was made and she in fact had high blood pressure.

Mrs Laurenço's daughter was born 27 years ago, five years before Brazil's 1988 constitution established health care as the "right of all and the duty of the state." By the time of her final pregnancy in 1997, the impact of that lofty principle was already being felt in her poor neighbourhood of Cidade Tiradentes on the far edge of São Paulo.

"During my last pregnancy the Family Health Programme already existed and I was looked after very well. It was another world from my first pregnancy. I had a check-up each month, and I could call the surgery and talk to a doctor on the phone. It was a totally different experience."

Mrs Laurenço is one of the tens of millions of citizens, mostly poor, who have benefited from the revolution in Brazilian health care that resulted from the creation of a national health system, known as Sistema Único de Saúdeor (SUS).

"After 1988 access to health care became a right for all, and we had the incorporation of at least half the population into the health system from which they had been previously excluded. Now 150 million people out of a population of almost 200 million rely exclusively on the SUS," says the country's health minister José Gomes Temporão.

"This process was fundamental in guaranteeing that the great majority of the Brazilian population had access to health care in the widest sense, from primary through secondary care to more complex medical procedures such as organ transplantation. This was a profound change and has been accompanied by very positive indicators in relation to the increase in coverage by the Family Health Programme and a subsequent reduction of infant mortality."

Primary care

The Family Health Programme is the cornerstone of the state's new public health service. Its goal is to orientate Brazil away from a health model focused on specialists and towards one based on general practitioners and an emphasis on prevention rather than cure. The programme is made up of 31095 family health teams and covers 95% of Brazil's 5564 municipalities. These teams—which at a minimum are made up of a doctor, a qualified nurse, and community health workers—now attend to 98 million Brazilians, up from 62.3 million in 2003. In the past seven years antenatal care consultations by these teams shot up by 125% from 8.6 million to 19.4 million.

The effect has been startling. A 2006 study showed that for every 10% advance in coverage by the Family Health Programme there was a 4.6% reduction in infant mortality.[1] Between 2003 and 2008 the number of deaths fell from 23.6/1000 births to 19/1000, putting the country on track to meet its millennium development goal of reducing infant mortality by 75% three years ahead of schedule.

"There is plenty of evidence to show that the kind of investment in providing public health care that is both preventive and curative has really made a difference in the health of the Brazilian population," says James Macinko, associate professor of Public Health and Health Policy at the Steinhardt School of New York University. "Brazil has had one of the most rapid declines in under 5 mortality. Some demographers say this may be one of the fastest declines in under 5 mortality ever recorded. Since 2000 the rate just went straight down. It is remarkable." This success has occurred amid broader social programmes set up under the government of outgoing President Luiz Inácio Lula da Silva with the aim of eradicating extreme poverty by 2016.

"The progress in attacking infant mortality accelerated dramatically under Lula because his government also invested in other sectors with things like the *Bolsa Família* programme which provides supplemental food, especially to kids while making sure they go to school," says Professor Macinko. "There has been a gigantic decrease in illiteracy rates, and we know one of the most important determinants of whether a child is going to live a long and healthy life is whether his or her mother is well educated. Better educated mothers are better able to cope, better able to navigate the health system and to identify danger signs if the child is ill."

Private competition

But despite more cash from the Lula administration—spending on the SUS rose from 2.89% of gross domestic product in 2000 to 3.67% in 2008 while spending on the Family Health Programme has quadrupled since 2003—the public system is chronically underfunded. Although Brazil spends 8.4% of its gross domestic product on health,

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Michele Basilio, aged 16, waits for an x ray for her daughter at Assistencia Medica Ambulato in Sao Paulo, Brazil. The clinic offers free primary care to favela residents

which is the same as the United Kingdom, only 41.6% is for the public sector while in the UK this figure is 79.3%.

"Brazil is possibly the only country that has a universal system but where private spending on health is greater than public spending. This makes it impossible to provide integrated services with the amount of spending we currently have. Total spending on health is not so low compared to gross domestic product, but private spending is very important and we have a chronic underfunding of the SUS," says Ligia Giovanella, a researcher with the National School of Public Health at the Oswaldo Cruz Foundation.

As a result of this underfunding, users of the SUS often complain about the amount of time it takes to see a doctor, even though they are happy with the service once they do. "I had to wait six months until I saw a specialist. How is this preventive medicine?" says Edileusa Barbosa da Silva, a saleswoman from Osasco in the state of São Paulo who is being tested for osteoporosis. "The medical attention has been very good but you have to wait in line a lot."

This chronic underfunding has also delayed the overcoming of regional inequalities and structural deficiencies that the SUS inherited at its creation. Before the 1988 constitution the health system was provided by the social security ministry and covered only workers in the formal labour market. This meant that Brazil's health resources were focused on hospitals and medical specialists and concentrated in large cities, predominantly in the wealthy south and southeast. It was poorly equipped to provide the desperately needed primary care to the majority of poor Brazilians who live in the northeast and north. The challenge in overcoming these regional inequalities is all the greater because the setting up of the SUS saw health responsibilities devolved to Brazil's state and, in the case of primary care, municipal governments which previously had no role in health management.

"With the growing economy millions of Brazilians are entering the new middle class, and surveys show they dream of having a health plan"

"Before SUS over 90% of municipalities had no involvement in health so they did not have the officials to take on their new responsibilities. We had to create these secretaries of health for them and then build their teams. Seventy per cent of municipalities have fewer than 20 000 inhabitants and did not have the capacity, human, or financial, to do this themselves. It was hard to find people willing to accept low salaries to take jobs in these smaller, poorer municipalities at first. This is a long process and a cost," says Renílson Rehem de Souza of the National Council of Health Secretaries and who served in the health ministry during the 1990s when the SUS took shape.

The result is that even after two decades of public health care large regional imbalances remain in basic measures such as infant mortality. In Brazil's northeast, infant mortality in 2007 was 27.7/1000 children born, well above the national average of 19.3/1000 and more than double the 12.91/1000 in Brazil's wealthy south.

This is despite the Family Health Programme reaching almost all of the northeast's municipalities and over 70% of the population. To combat the problem the government has embarked on a new campaign aiming to reduce by 5% the number of deaths of children aged under 12 months in the region and in neighbouring Amazonia. "We need to improve the quality of spending and management," says Dr Temporão. "To provide universal coverage in a country so unequal, and so big and diverse is a great challenge from the point of view of logistics. We have to utilise less rigid and bureaucratic structures than at present and learn to be more agile and use resources so we get a better and quicker return."

The risk is that without more cash and great agility in delivering services the SUS will not be seen to be overcoming these obstacles more rapidly and the private sector will grow, undermining Brazil's ambition for a universal system that attends to all citizens regardless of class. "We run the risk of an 'Americanisation' of our system, which would be a profound contradiction of what was won in the constitution of 1988," warns Dr Temporão.

Public health officials say many of Brazil's cheaper private health plans are inferior to the service now provided by the SUS, and even the more expensive plans rely on the public sector for complex procedures such as transplantation. But even so, a persistent impression among Brazil's new aspiring classes is that the public system is inferior to the private, undermining its efforts to become a truly universal service.

"With the growing economy, millions of Brazilians are entering the new middle class, and surveys show they dream of having a health plan. The challenge for the SUS is to try to capture this new class. If this does not happen the trend is that more people will migrate into the middle class and the private health system. If we do not improve the SUS we will lose this battle and this tendency will consolidate a type of apartheid in the provision of health," warns Dr Renílson Rehem.

"There is a practical question here," says Mrs Giovanella. "When you look at the countries that have less inequality you see they are the ones with universal healthcare systems where the whole population uses the same system." A pertinent observation for a country determined to remove itself from the list of the world's most unequal societies.

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Going mobile in Delhi

We are working with Save the Children to raise £30 000 to help children and mothers in some of the world's poorest regions. Money raised will be invested in projects such as the mobile health clinics described here by **Ganapati Mudur**

A mother with a baby in her arms tugs at the elbow of Madhu Jain, a doctor sitting inside a van that has been turned into a mobile clinic in northwest Delhi. It is parked in Holambi Kalan, an urban slum settlement where many brick houses have neither paint nor plaster, where narrow open drains run along the sides of houses, and where flies buzz over banana peels.

"Just one more—take only one more," the mother pleads with the doctor. It was just past 1 pm and time for the van to leave for its second site of the day. Dr Jain allowed the mother to climb in, examined the child's chest sounds and throat, prescribed paracetamol, and told the mother to watch out for signs of worsening illness. A pharmacist in the van handed over the medicine free of charge.

"The patients just keep coming—if we're here all day, we'll still get patients," said Dr Jain, one of the two physicians in the mobile clinic who spend five days a week providing diagnostic, therapeutic, and nutrition advice to patients. The clinic visits two sites a day, spending nearly four hours at each site.

The van, which has been operational for a year, is the first of six mobile clinics that Save the Children hopes to run for the urban poor, an effort to fill gaps in government run public healthcare services visible even in India's capital.

Twice a week, the clinic rolls into Holambi Kalan and its neighbouring settlement Holambi Khurd. Together they have an estimated 11 000 households and population of around 50 000. A government "dispensary" is only a 10 minute walk away, and the state run Raja Harishchandra Hospital is about 6 km away. But queues of patients always form outside the vans.

The mobile clinic is equipped with an x ray machine and medicines—antipyretics, analgesics, antibiotics, and anti-allergy drugs. "Respiratory infections and gastrointestinal illnesses seem to account for the majority of cases," said Dr Jain. "When patients with serious illness come in, they're asked to go to a hospital."

"We get 30, 40, sometimes more than 50 patients visiting the clinic at each site," said Geeta Mann, a community health worker with Child Survival India, a non-government partner of Save the Children that is running the mobile clinic.

Ms Mann is the bridge between the local community and the mobile clinic. "Many people here prefer mobile clinics to government health centres. They are closer to their homes, and they save on transport," Ms Mann said.

A study by the Urban Health Resource Centre in New Delhi five years ago had outlined other reasons why even primary health services, despite proximity, do not reach India's urban poor. These include perceptions of unfriendly treatment at government facilities, timings that do not suit working people, and a lack of sensitisation among service providers. [1]

"At night, there's no transport to take even expectant mothers for delivery," Ms Mann said.

Munni Devi, aged 40, recounted how she had taken her son who had a high fever to a large government hospital. Doctors there prescribed medicines not available in the hospital's own inventory of drugs, and something that she could not afford. Her son's condition worsened, and he died. "Hospitals need to have special emergency medicines—no child should be lost like this," Mrs Devi said.

"We have two Indias in this country," said Rajiv Tandon, a paediatrician and adviser on maternal and child health with Save the Children. "We have an India where you measure economic growth and see this incredibly shining superpower in the making, and you have India represented by the experiences of women such as Munni."

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Beyond the patient

Do family and hospital doctors have a duty to the health of their local community, or just to the individual patient in front of them? **Jacqui Wise** and **Rebecca Coombes** report on a discussion hosted last week by the *BMJ* and the King's Fund

BEN MAY

Does a general practitioner in a mining area who encounters a cluster of emphysema cases have a duty to speak up about local working conditions? Does a doctor working in an area of high smoking prevalence have a duty to target the community with smoking cessation or other initiatives? Speakers—including a GP and a public health pioneer—at a discussion hosted by the *BMJ* and King's Fund in London last week were united in agreement that all clinicians do have a responsibility to the population as well as to the individual patient.

Iona Heath, president of the Royal College of General Practitioners, said: "In any collectively funded health system, GPs must find a way to balance the needs of the individual with the needs of the population. On the other hand, if you are an entirely private physician, and therefore it is the patient who funds you, you have no responsibility for the rest of the population."

But she added: "When seeing a patient in the consulting room, if your commitment is not absolute at that point then the patient doesn't feel seen or heard. They are likely to construe any decision you make as not in their interest." But this focus on an individual patient "doesn't mean we don't have a commitment to the population," she said.

Anna Dixon, director of policy at the King's Fund, said: "I believe doctors need to take a population outlook as well as an individual outlook. Many causes of ill health lie beyond the individual. Our circumstances to some degree shape our health—for example, our environment, community, and wider issues in society such as unemployment and poverty."

Ms Dixon gave an example of a GP seeing a patient with shortness of breath. The GP refers the patient to a respiratory physician, who diagnoses emphysema, and the patient is treated. "The GP has carried out their duty to the patient. But what if they saw a large number of cases? Perhaps there was a lot of mining in the area. Then the doctor has a duty to speak up."

Ms Dixon said that research carried out by the King's Fund and the London School of Hygiene and Tropical Medicine on the effect of the Quality and Outcomes Framework (QOF) highlighted several barriers to a population focused approach.

Elizabeth Paice, dean director at the London Deaney, said: "The GMC, is very clear that every doctor has responsibility for the health of the population." Professor Paice, a consultant rheumatologist, said "We could make a huge difference to the outcome of rheumatoid arthritis, for example, by educating the population about symptoms so they are diagnosed earlier."

Muir Gray, chief knowledge officer of the NHS, said doctors should be aware of and be bothered about variations of service delivery in their area, which might affect the health of a local population. Sir Muir's office has just published the *NHS Atlas of Variation*, which plots variations in service and health across England. It shows, for example, a 50-fold variation in rates of transient ischaemic attack across the country.

Sir Muir, who helped pioneer Britain's breast and cervical cancer screening programmes, said he didn't expect all clinicians to have responsibility for the health of the population. "We are proposing that the 3000 clinical directors in England would be responsible for thinking about the health of their local population," he said.

For example, a clinician in East Sussex would look at how chronic obstructive pulmonary disease is managed in the area and produce an annual report. Sir Muir said the 3000 clinicians would be given time and support to "think about where the action isn't rather than where the action is."

Professor Paice ended the session with the sobering thought that doctors did have some responsibility to UK taxpayers. "Doctors have a responsibility to consider the value of what they are doing in the context of the economic situation," she concluded.

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BMJ BLOGS **Desmond O'Neill**

An appalling vista

It is sad that the memory of Lord Denning, the eminent jurist, will always be associated with the unhappy phrase "appalling vista," pronounced during the appeal hearing of the Birmingham six. By this he meant that prolonged, pervasive, and systematic wrongdoing by agencies of the state was inconceivable: unfortunately, subsequent scrutiny was to prove him misguided.

The Irish ombudsman presented an equally appalling vista to the Irish people and government recently. Concerned about persistent complaints to the ombudsman over 25 years by older people and their relatives about failure to inform them of their rights to publicly funded nursing home care, she launched an extensive investigation. Her findings were quite categorical in confirming what many clinicians already suspected: over a period of almost 40 years the state had continually failed to clarify eligibility under a 1970 act of parliament that established a right to publicly funded long term care to those who needed it.

This left a vacuum whereby the vulnerable, disempowered, and voiceless—knowing little better—opted for either a lesser subvention (a fraction of the cost) or paid the full cost. Those in the know, and those with feisty advocates or support from clinicians willing to counter the prevailing culture, could avail themselves of this eligibility as either a publicly funded place in a private nursing home or in a public or voluntary nursing home. Nearly the only way to be in a position to do this was from a hospital bed, but those who did so were often vilified as "bed blockers" or viewed as unreasonable or demanding.

Some of the most heart breaking scenes in my clinic over nearly 25 years were from families who were now cracking under the financial pressure, yet felt unable to use the only routes to a publicly funded bed. These were either to sue the health services—a risky and potentially highly costly process for people already under huge pressure—or to engineer a return to the emergency room and hospital, an unpalatable choice at many levels.

Desmond O'Neill is a consultant in geriatric and stroke medicine in Dublin

Read this blog in full at bmj.com/blogs