

Healthcare in Brazil

Introduction

Brazil, a country of some 188 million people in a land area of 8.5 million square miles (World Factbook), is officially classified by the World Health Organization as a “developing” country (WHO: Brazil). Nevertheless, the CIA’s World Factbook characterizes the country as having “large and well-developed agricultural, mining, manufacturing, and service sectors,” and states that “Brazil’s economy outweighs that of all other South American countries.” Its gross domestic product (GDP) per capita was reported to be \$8, 600, which compares to a per capita GDP of \$15, 000 in the neighboring country of Argentina, and \$39, 900 in the United States. But averages can be misleading; as the World Factbook notes, “Highly unequal income distribution remains a pressing problem.” This combination of a relatively strong economy, but with wide variations in personal income, has an impact on various aspects of healthcare in Brazil, including epidemiology, cultural dimensions, and who and how various segments of the healthcare system provide help. The remainder of this paper focuses separately on each of these three areas, although it is clear that they are interdependent. Epidemiology is influenced by cultural practices as well as by who provides care and how, and cultural practices have an impact on who provides care and how.

Epidemiology and Healthcare Expenses

This section presents some basic information related to overall healthcare expenditures, then life expectancy and infant mortality statistics are presented, next it

focuses on immunizations and childhood diseases, and finally the effects of the worldwide AIDS/HIV epidemic on Brazil are explored.

Healthcare Expenditures

As indicated in Table 1 (adapted from WHO), Brazil spent about 7.8 percent of its GDP on healthcare. This compares to about 8.9 percent in the neighboring country of Argentina, and 15.2 percent in the United States. Another interesting comparison is with one of the world's poorest countries, Malawi, with a per capita GDP of only \$519, but which spends 9.3% of its GDP on healthcare. Of course, because the overall GDP is so low, the dollar amount spent per person is still far lower in Malawi than in Brazil. At the other end of the spectrum, Sweden's healthcare system is typically considered to be one of the world's best, and it spends 9.4% of its GDP on healthcare (virtually identical to Malawi), but because its per capita GDP is \$30, 336 (slightly lower than the United States), the dollars spent per person is many times that spent in Malawi or Brazil. In Brazil, the total health expenditure per person is \$256 as compared to \$3, 616 in Sweden, \$14 (yes, fourteen dollars, this is not a typo) in Malawi, and \$356 in the neighboring country of Uruguay.

The Organic Health Law of 1990 helped to contribute to healthcare in Brazil, as it unified the public health system and extended coverage to people outside of the social security system (Brazil Health Care System), and health expenditures as a percent of GDP have grown. Nevertheless, the per capita health expenditures dropped from 1998 to 2004, apparently as the result of population growth that was more rapid than GDP growth. As Pasche et al. (2006) note, making the unified system work has been challenging because of the need to balance the rights and responsibilities of the states

with the uniform federal standards, a problem that resonates with the same kind of balancing that takes place in the United States. Barreira (2003) suggests that the federal government has been pushed by the working classes to make health and environmental reforms that truly benefit the poor; workers in other South and Central American countries have not always been so influential.

Table 1

BRAZIL: National Expenditure on Health

A. RATIOS AND LEVELS	1998	1999	2000	2004
I. Expenditure ratios				
Total expenditure on health (THE) % GDP	7.4	7.8	7.6	7.8
General government expenditure on health (GGHE) % THE	44.0	42.8	41.0	48.1
Private expenditure on health (PvtHE) % THE	56.0	57.2	59.0	51.9
Social security expenditure on health % GGHE	0	0	0	0
II. Per capita levels				
THE per capita at exchange rate (US\$)	345	243	263	256

Source: <http://www.who.int/nha/country/BRA.xls> (modified)

Life Expectancy and Infant Mortality

According to the World Health Organization, the life expectancy at birth in Brazil is 67 years for men and 74 years for women. Table 2 shows the life expectancy figures for Brazil and, for comparison, in some other countries. The leading causes of death for adults are: 1) diseases of the circulatory system (1/3 of all deaths annually), 2) neoplasms, and 3) communicable diseases. These causes are not equally distributed across all segments of society; among the indigenous peoples malaria, tuberculosis and other respiratory diseases are more significant causes of adult deaths (PAHO, 2007)

Table 2

Life Expectancy for Men and Women in Brazil and in Comparison Countries

Country	Men	Women
Brazil	67	74
Uruguay (neighboring country)	71	79
Paraguay (neighboring country)	70	74
Sweden (highly developed country)	78	83
Malawi (very poor country)	41	41

Source: <http://www.who.int/nha/country/BRA.xls> (modified)

Unfortunately the WHO does not give statistics separately for the different parts of Brazil, but it seems reasonable to speculate that in the relatively urbanized parts of southern Brazil that are adjacent to Uruguay the life expectancy would be comparable, but in the middle of the Amazon jungle the life expectancy might be much less. (There is no part of Uruguay that is comparable to the Amazon jungle in Brazil.) In the neighboring country of Paraguay, the life expectancy for women is identical to Brazil, but the life expectancy for men is slightly higher. Compared to Sweden, Brazil appears to lag slightly behind, but compared to Malawi, Brazil appears to have a reasonable life expectancy, especially for a “developing” country. Nevertheless, the figures would doubtless be more impressive if the quality medical care available in the wealthy urban areas could be extended to the urban slums and the rural areas. However, medical care is not the only important component of healthcare; many other factors influence health such as preventative care and more generally refocusing upstream (besides access to medical insurance or educational programs are also unequally distributed). This means looking far enough ahead into the future to avoid health problems before they even start.

Examples may include gender equality and a more equal income distribution. If there

were ways to address these issues in addition to implementing improvements on the healthcare system, these statistics would look better.

Number of live births and infant mortality information for Brazil is in Table 3.

Table 3

Birth, Infant Mortality, and Child Mortality Information for Brazil

Development status:	GNI / capita (US\$):¹	3,000	Infant (under 12 months) mortality rate per 1,000 live births	25
	Developing		Child (under 5 years) mortality rate per 1000 live births	32
	GDP / capita (US\$):¹	8,195		

Population data in thousands ²	2005	2004	2003	2002	2001	2000	1990
Total population	186,405	183,913	181,408	178,895	176,377	173,858	149,394
Live births	3,726	3,728	3,724	3,714	3,700	3,681	3,614
Surviving infants	3,632	3,631	3,624	3,610	3,592	3,569	3,443
Pop. less than 5 years	18,024	17,946	17,844	17,719	17,573	17,412	17,678
Pop. less than 15 years	51,923	51,727	51,577	51,483	51,458	51,505	52,730
Female 15-49 years	51,782	51,210	50,586	49,907	49,167	48,366	38,856

Source:

<http://www.who.int/vaccines/globalsummary/immunization/countryprofileresult.cfm?C='bra'>
(modified)

The infant mortality rate in Brazil and comparison countries is in Table 4. As with the life expectancy figures, it is reasonable to assume that the mortality rate varies widely with the immense economic and geographic differences in Brazil. Although the table shows only infant mortality, not child mortality, the child mortality rate in Brazil (32 per 1000), is reasonably similar to its neighbors; it is well ahead of Malawi, but well behind Sweden. Table 3 also shows that Brazil is making progress with respect to infant

Table 4

Infant Mortality in Brazil and in Comparison Countries

Country	Mortality per 1000 live births
Brazil	25
Uruguay (neighboring country)	12
Paraguay (neighboring country)	36
Sweden (highly developed country)	3
Malawi (very poor country)	107

Source: <http://www.who.int>

Mortality rates. In 1990 there were 3.6 million live births, and 3.4 million surviving infants; thus, about 200, 000 did not survive. In 2005 there were 3.7 million live births and 3.6 million survived, so “only” about 100, 000 did not survive. Social factors contributing to this improvement include a greater willingness, and opportunity, for mothers in poor areas to receive assistance from government-sponsored clinics and grassroots organizations.

Childhood Diseases and Immunizations

Table 5, adapted from the World Health Organization, suggests that Brazil has made remarkable progress in reducing the incidence of childhood diseases that can be life-threatening, especially in areas with marginal healthcare facilities and limited economic and educational resources. The only disease listed with over 1, 000 cases reported in 2004 was Pertussis. This number still reflected an enormous improvement from 1980 and 1981 when more than 40, 000 cases were reported. There were no polio cases in the twenty-first century, down from 1, 342 in 1980.

Table 5

Prevalence (number of cases) of Childhood Diseases in Brazil from 1980 to 2004

	2004	2003	2002	2001	2000	1981	1980
<u>Diphtheria</u>	15		64	10	46	3,846	4,646
<u>Measles</u>	0	2	1	1	36	61,281	99,263
<u>Mumps</u>				0			
<u>Pertussis</u>	1,146		924	477	764	42,247	45,752
<u>Polio *</u>	0	0	0	0	0	122	1'342
<u>Rubella</u>	319		1,256	3,759	8,781		
<u>Rubella (CRS)</u>	16		17		37		
<u>Tetanus (neonatal)</u>	14		31	17	34	0	0
<u>Tetanus (total)</u>	477		268	129	346	2,940	3,098
<u>Yellow fever</u>	5		16	0	73	22	27

Source:<http://www.who.int/vaccines/globalsummary/immunization/timeseries/tsincidencebycountry.cfm?country=Brazil> (modified)

The decline in measles cases was especially dramatic, from 99, 263 in 1980 and 61, 281 in 1981 down to 0 in 2004. This reflects worldwide success in preventing measles. Even in as poor a country as Malawi, the incidence of measles in 2004 was 1, 116, down from 163, 000 in 1980.

To put the numbers in Table 5 into a more familiar context, Table 6 presents comparable information for the United States. Although Brazil had substantially more cases of several childhood diseases than the United States in 1980, by 2004 the countries appeared to be quite comparable. Indeed, the Pertussis rate¹ in the United States was considerably above the rate in Brazil.

¹ Although Tables 5 and 6 show number of cases, and not rates, the Brazil rate is the prevalence divided by the population (188 million) while the U. S. cases would be divided by about 300 million, confirming that the pertussis rate is indeed higher in the U. S.

The reason for this success in Brazil is at least partially attributable to the widespread use of immunization for childhood diseases. According to the WHO, measles, DPT (diphtheria, Pertussis, and tetanus), polio, and hepatitis B vaccination rates all exceeded 90%. Even in the economically depressed areas of the country that suffer many hardships and even malnutrition, these childhood diseases can be controlled by the effective government-sponsored immunization program.

AIDS in Brazil

Despite the progress in reducing some diseases, Brazil remains, in the words of U. S. Agency for International Development (USAID), “the epicenter of the HIV/AIDS epidemic in South America. By itself, Brazil accounts for 57% of the AIDS cases in Latin America and the Caribbean.” USAID estimates that there are 610, 000 people in Brazil currently living with AIDS, or about 0.7 percent of the population. Social and

Table 6

Prevalence (number of cases) of Childhood Diseases in the United States from 1980 to 2004

	2004	2003	2002	2001	2000	1981	1980
<u>Diphtheria</u>	0	1	1	2	2	5	3
<u>Measles</u>	37	42	37	116	85	3,124	13,506
<u>Mumps</u>	258	197	238	231	323		
<u>Pertussis</u>	18,957	8,483	8,296	5,396	7,122	1,248	1,730
<u>Polio *</u>	0	0	0	0	0	6	8
<u>Rubella</u>	12	7	14	21	166		
Rubella (CRS)	1	0	0	2	7		
<u>Tetanus (neonatal)</u>	0	0	0	0	0	0	0
<u>Tetanus (total)</u>	26	20	27	27	26	72	95
<u>Yellow fever</u>		0	1	0	0		

Source: [http://www.who.int/vaccines/globalsummary/immunization/timeseries/tsincidencebycountry.cfm?country= United States](http://www.who.int/vaccines/globalsummary/immunization/timeseries/tsincidencebycountry.cfm?country=United+States) (modified)

environmental factors contributing to this problem are lack of effective educational programs and the taboo nature of sexual-related discussions in this largely Roman Catholic country. As Chacham et al. (2007) have argued, one social force that can have a positive impact on the rate of AIDS infections is greater autonomy for women. When women feel, and in fact are, less controlled by men they are more willing to discuss such things as use of condoms with their sexual partners, and use of condoms is an important preventative measure to limit the AIDS epidemic. Although the AIDS rate in Brazil is certainly unacceptably high, this number can be compared to the rate of 6.0 percent in Sub-Saharan Africa, suggesting that the social influences in Brazil are having at least a moderate positive effect. There are a variety of social, cultural, and economic factors that may contribute to this disparity.

Summary

As a “developing country” the healthcare system in Brazil appears to produce epidemiological results that are consistent with its neighbors, which are also developing countries. It is certainly not at the level of a Sweden, but is also clearly above a country like Malawi. More importantly, Brazil has made progress relative to its own position a decade ago.

Cultural Dimensions of Health, Disease, and Healing in Brazil

The economic and geographical diversity in Brazil is reflected in cultural attitudes about health and disease. In the Amazonian region, the indigenous people rely to a large extent on traditional shamans, in poor areas surrounding major metropolitan areas clinics

exist, but quality care is not available to all, and in middle to upper class regions medical care is very similar to the United States.

Medicine in the Amazon

There were about four million people living in the Amazon when the first Europeans arrived (Butler, 2006). They had developed natural immunities to most of the diseases in the region, and shamans used herbal medicines and spiritual healing to care for people in the communities. The Europeans brought many diseases to which the native people had no immunity, especially measles, tuberculosis, and the flu. At the end of the first century of European presence in the region, the native population was reduced by 90% (Butler, 2006).

Beliefs about illness in the Amazon. Despite the external European influences, many of the beliefs about causes and cures for illnesses remained unchanged. The traditional medical practices that were practiced for hundreds if not thousands of years continue right up to the present day. Figure 1 shows a contemporary picture of a medicine man (shaman) who looks much the same as one would have hundreds of years ago. In a comprehensive study of ethnomedicine and cultural beliefs among the Kulina



FIGURE 1. Medicine man (shaman) from the Brazilian Amazon. (www.mongabay.com/images)

tribe in western Amazonia, Pollard (1996), an anthropologist, noted that the way personhood is defined has an impact on beliefs about medicine. In particular, mind and

body are seen as much more closely linked than they are in the United States. The shaman, then, treats the whole person, and treating the mind cannot be separated from treating the “medical” problem. Also of importance are the close social connections among all of the members of the tribe.

Choosing among healers in the Amazon. Although western medicine and indigenous medicine are in conflict in some areas of the Amazon, they can also be made to work together. The Amazon Conservation Team is working on a program in which tribal healers operate traditional medicine clinics that are built right alongside primary care health outposts (Amazon Conservation Team², 2006). In this program, traditional herbal healers and shamans are “on equal footing with western-trained health workers and have been restored to full honor in their communities.” This program was recognized by UNESCO/Nuffic as representing a “best practice for indigenous knowledge,” and was also recognized in a World Bank global competition. Nevertheless, according to the Amazon Conservation Team, shamans appear to be losing some of their influence as they grow older; many are in their 70’s and do not have younger apprentices.

Structure, culture, and health in the Amazon. In the western regions of Amazonia, shamans distribute hallucinogenic drugs such as ayahuasca. In addition to the spiritual healing of the shamans, herbal remedies are also common. The shaman combines herbal medications with incense, chants, and colorful dances. Knowledge of herbalism is widespread in this area, but is not necessarily widely valued. A western writer reported that when he broke his leg, he was given an herbal remedy that he thought was highly effective, but the indigenous people who gave it to him just said, “everybody knows that, even the children” (Lenarts, 2006). The biological and chemical aspects of

² According to their Website, the Amazon Conservation Team is a non-profit organization organized to “work in partnership with indigenous people in conserving biodiversity, health, and culture in tropical America.”

these medicines are closely linked to the spiritual value. The shaman may be able to cure some diseases that a mere herbalist cannot. As the anthropologist Lenarts argues,

A shaman does not necessarily need to be a good botanist. His main concern is managing a network of personal relationships involving all kinds of living beings. This network is supposed to be the mainspring of illness—a belief shared by both shamans and ordinary people.

For centuries, westerners exploited the peoples of the Amazon region, bringing diseases and sometimes making them question their medical practices. Right up to the present day well-intentioned missionaries have been interfering with traditional beliefs. “Many anthropologists fear the missionaries will harm indigenous people by weakening native culture and religion and by exposing them to new germs and illnesses” (Akha, 2006). According to Ivaneide Cardozo, a board member of a nonreligious group in the Rondonia state, “The Surui no longer worship shamans because missionaries told them it was bad. That's a terrible, immense cultural loss” (Akha³, 2006).

But in a country with a strong Christian religious tradition, there are fewer constraints on missionaries. Furthermore, clashing cultures often make it difficult to agree on the best course of action in a particular case. A classic case involves actions taken by the Brazilian chapter of a missionary group, Youth with a Mission, which is commonly known by its Portuguese acronym, Jocum. They removed two children from their Suruwaha tribal village to get treatment in Sao Paulo. One child had cerebral palsy and the other was a hermaphrodite. Although they obtained permission from the

³ The Akha are a native tribe in Thailand, and Akha.org is dedicated to their preservation. They have generalized this concern to all native peoples that they see as potentially threatened by missionaries or other western influences.

children's parents, they did not get clearance from the government's Indian affairs agency, Funami.

In terms of choosing among healers, there is a tendency to support the local and familiar, but the family was apparently convinced that there are times when the only answer comes from western-style medicine. The government did not welcome this kind of interference with tribal affairs, but hunting tribes, such as the Suruwaha, would traditionally abandon children with physical abnormalities to die in the jungle. With treatment, the children were successfully returned to their parents and are being accepted in the village. (Akha, 2006). It is hard to argue that it would have been better to follow traditional tribal practices and allow the children to die.

Some herbal medicines that shamans and herbal healers used for centuries are now being recognized as effective treatments. For example, a drug to treat diarrhea that comes from a tree in the Amazon is now recognized, through clinical trials, as an effective treatment that has proven especially valuable for diarrhea related to AIDS complications (James, 1999). The Brazilian government is engaged in an effort to catalogue thousands of plant species from the Amazon region and to better understand potential medicinal benefits. They wanted to do this before the multi-national pharmaceutical companies operating in Brazil had destroyed some of the potentially important habitats (BBC World Service, 2002). They were concerned about habitat destruction not only in the Amazon, but also in the Pantanal wetlands and the Mata Atlantica coastal forests.

Traditional Medicine Outside the Amazon Area of Brazil

Beliefs about illness. Outside of the Amazon region, there are also diverse beliefs about the most effective treatments for illness. The western biomedical model is common in large cities such as Sao Paulo or Brasilia, but in outlying areas beliefs in herbal remedies remain strong. Indeed, the use of herbal remedies in urban environments is still extensive. Over 316 herbal remedies are reportedly used, and their use is especially high among women and in the 41-50 age group (Brandão et al., 2006). The authors of this study concluded, “there is a strong interest in using herbal remedies by this population and special efforts are thus required to improve the access and quality of such products in Brazil and other larger cities in Latin America.”

Choosing among healers. Even outside of the Amazonian region, there is still a quite diverse choice of healers. In addition to western medicine and various types of traditional medicine using a variety of herbal treatments, alternative surgical techniques are also practiced outside of the Amazonian region of Brazil. This surgery may be practiced by “healer-mediums” who engage in “trance surgery.” In the 1950’s and 1960’s, a number of healer-mediums practiced in Brazil. The best-known was named Ze Arigo. He treated thousands of patients from diverse backgrounds and from the poor to the powerful. He was not a physician, and so the “surgery” he performed was technically illegal. Although some believed his methods appeared to be effective, legal authorities and the Roman Catholic Church, which is the dominant religion in Brazil, responded negatively (Don & Moura, 2000). Because Arigo was a Catholic himself, he said he was reluctant to begin this trance surgery, but through a dream he came to believe that he was chosen to do this work. He had no medical training, but said that the spirit of “Dr.

Adolfus Fritz,” a German medical student who died in the 1800’s, was whispering in his right ear.

In trance surgery, the “surgeon” goes into a trance before operating. Blunt instruments were sometimes used so the cutting was only simulated, but in other cases the cutting was quite real and often used instruments that were not sterilized. No anesthesia was used, and some patients appeared not to perceive pain, but others did. Healer-mediums also injected normally toxic substances such as alcohol, iodine, and paint thinner, but these injections did not seem to have negative consequences, perhaps because the quantities were quite limited. They would also make incisions on the parents of sick children, but there was no evidence on the effectiveness of these practices. There may have been some real healing due to placebo effects, but the James Randi⁴ Educational Foundation (2006) dismisses Arigo as essentially a fraud, and says there is no evidence that a “Dr. Adolfus Fritz” ever existed.

Cultural Beliefs and Infectious Diseases

As indicated in the first section of this paper, Brazil has been remarkably successful for a developing country in combating infectious diseases. The government has been very supportive of inoculation programs and in supporting community clinics that are open for all. These programs were possible only because they were consistent with the cultural values in Brazil. Social institutions, such as the Catholic Church, that may have been of questionable value in dealing with problems in the Amazon, could

⁴ James Randi became famous for debunking a variety of different psychics, especially Uri Geller who claimed to be able to bend spoons through his psychic powers. In the 1970’s Geller even convinced some scientists at the Stanford Research Institute that his powers were real, but Randi demonstrated that they were just common magician tricks in a book entitled *The Magic of Uri Geller*. In 1986, Randi received a MacArthur “genius” award for this work and used some of the proceeds to establish his educational foundation.

nevertheless be helpful in the value that they put on human life, and by extension, the policies supporting widespread inoculations and community clinics needed to put those values into action.

As noted in *Sickness and Wealth* (2004), opportunistic infections in Brazil declined significantly from 1997 to 1999 resulting in a savings of over 400 million U. S. dollars for the Brazilian Health Ministry. Church attitudes about sex being for procreation only, and discouraging the use of condoms for birth control, may have contributed to AIDS gaining a strong foothold in Brazil. But whatever these attitudes were originally, the people of Brazil decided not to look the other way once they recognized the seriousness of the problem, and instead started a very vigorous program to bring AIDS under control.

Brazil was able to reduce AIDS death rates by 50% in three years. The way that Brazil was able to achieve these remarkable strides was through an aggressive program of making copies of effective AIDS drugs that were under patent protection in other countries. Furthermore, Brazilian government built and staffed clinics that were open to all. The demands of AIDS activists in Brazil created social benefits not only for those citizens who were infected, but for the society at large. *Sickness and Wealth* also points out that success of these programs tends to feed off of itself as the social stigma is reduced when people begin to realize that the disease can be defeated, or at least significantly delayed, without resorting to witchcraft or questionable “cures” such as having sex with a virgin.

The effectiveness of the Brazil AIDS fight as also chronicled in Laurie Garrett’s *Betrayal of Trust*, can also be seen as an example of the importance of cultural beliefs in

combating a major disease. The value placed on human life of all people in the Brazilian culture (and not just those able to pay high prices) was essential for the success of the program. This cultural inclusiveness may be partly the result of the diversity of the Brazilian population. Garrett argues that highly active antiretroviral therapy (HAART) may be good for the drug companies and good for wealthy nations, but that “its price tag—\$10, 000 to \$60, 000 a year for the drugs alone—rendered HAART unusable for more than 90 percent of the world’s HIV population, estimated in 1999 by the United Nations AIDS Programme to number forty million people.” She argues that there were insufficient incentives for the drug companies to develop drugs that would be would be less costly and easier to administer in developing countries. Drugs for developing countries were simply not profitable enough to get the attention of the drug companies. It is in this context that the Brazil experience is especially noteworthy. Even with all of the expense and known problems with the HAART drugs, the government of Brazil, with the support of Brazilian people, was committed to do what was necessary to help its population. She states, “That Brazil, a developing country, committed to purchasing HAART drugs and dispensing them for free to its entire HIV population testified to the scale of acceptable pricing in a perceived national crisis.”

Summary

Despite its success with immunization programs for the traditional childhood diseases, with inoculation rates over 90% for measles, DPT (diphtheria, Pertussis, and tetanus), polio, and hepatitis B (World Health Organization, 2006) and its AIDS successes, the future is not totally bright as Brazil must continue to cope with limited financial resources and a large low-income population.

Healthcare System in Brazil: Who is Helping and How

A recurrent theme in the above sections of this paper is the diversity of cultural and economic conditions in Brazil; this theme is also echoed in who helps and how. Although there are certain national policies and practices, the healthcare system functions differently in different areas of Brazil, and the influence of external agencies (such as the World Bank or World Health Organization [WHO]) similarly varies from region to region. In the country as a whole, Brazil spent about 7.8 percent of its GDP on healthcare. This compares to about 8.9 percent in the neighboring country of Argentina, and 15.2 percent in the United States (WHO, 2007). The remainder of this paper will explore the how healthcare personnel are trained and retained, how healthcare is distributed (especially in remote areas and to underserved portions of the population) and the contributions of international agencies as well as grassroots organizations. Finally, the question of how the healthcare system of Brazil will continue to face these problems will be addressed.

Training of Healthcare Personnel

Brazil has 102 medical schools for a country of about 188 million people (Institute for International Medical Education, 2007). All but one of these schools is recognized by the Panamerican Federation of Associations of Medical Schools. These schools generally teach the western biomedical model. Nevertheless, medical students enrolled in at least one major medical school expressed an interest in learning more about homeopathic remedies and acupuncture. A survey of students at the Faculdade de Medicina da Universidade de Sao Paulo indicated:

Over 85% of the students considered that homeopathy and acupuncture should be included in curricula, as options (72%) or compulsorily (19%); 56% showed great interest in learning about them. Although 76% had little or no knowledge, 67% believed that these therapies had some effectiveness, and that chronic diseases (37%) or even chronic and acute diseases (29%) would be the main indicators for their use. Around 35% were receptive towards offering public primary care using both therapies, while 34% thought these treatments should also be available in hospitals and 60% believed they could be integrated with conventional medical practices (Texeira, Lin, & Martins, 2005).

Because of the generally high quality of medical education in Brazil, as well as the availability of good jobs within the country, Brazil has not experienced the brain drain of qualified medical personnel that has plagued many developing countries (Saravia and Miranda, 2004).

Medical training can be influenced by cultural attitudes. Organ donation, for example, might not be seen as positively in some countries as it is in the United States. But a survey of medical students at a Catholic medical school in Sao Paulo suggests that organ donation is approved by nearly all students. Of 580 students surveyed only five were opposed to donation. About 90% would authorize organ retrieval from their own relatives (Texeira, Lin, & Martins, 2005).

As in other countries, there are shortages in certain medical specialties. By 2025 the elderly population in Brazil is expected to grow to 32 million, but there are less than 500 doctors in Brazil who specialize in geriatrics, and even this small number is not

distributed evenly, so providing services in rural areas is especially problematic (Garcez-Leme, Leme, & Espino, 2005).

Although the program for training doctors resembles training programs in many developed countries, nursing training had lagged behind within the last couple of decades. Brazil had 200, 000 uncertified and untrained “auxiliary nurses” who had simply worked their way up from low-level positions with little or no training. About six years ago Brazil’s Director of Work and Education in Health and the Inter-American Development Bank (IDB) jointly started a program called the National Program for Training Auxiliary Nurses (PROFAE). As a result of this program, 200, 000 auxiliary nurses were trained and certified, and an additional 123, 000 were trained and are now practicing in every state in the country, as funded by the IDB. The program provided about 1, 200 hours of instruction for each nurse. It cost over \$300 million per year and was funded by the central Brazilian government supplemented with a loan from the IDB. The program was so successful that the government approached IDB to extend the program beyond nursing to include radiology, dental technical skills, home health care, laboratory skills, and health surveillance (IDB, 2006).

Distribution of Healthcare

Despite the high quality of care in some urban areas, there are still substantial concerns about the quality of healthcare in remote areas, both now and in the coming years. A study by the World Bank’s Independent Evaluation Group (1998) raises a concern that programs sponsored by the World Bank, however well-intentioned they may have been, were not necessarily effective in truly bringing quality healthcare to all segments of the population. Specifically, the evaluation group warned, “It is not clear,

for instance, whether the construction of clinics and health posts—critical elements of the Bank’s strategy in the late 1980s and early 1990s to improve the effectiveness of the system was the best means to improve access. Many of the health posts are underutilized, short of qualified staff, and lack the facilities to satisfy increasingly demanding and increasingly urban consumers, who instead often go directly to hospitals and clinics” (p. 2).

The availability of quality healthcare varies widely from region to region in Brazil. The ratio of doctors per 1000 is 3.28 in the urban areas but is only 0.63 in rural areas (CFM/FIOCRUZ 1996). Medical researchers in Brazil report,

One will find well-structured programmes in hospitals such as the Heart Institute of the State University of Sao Paulo, the Institute of Hematology of Rio de Janeiro or the Hospital Mae de Deus in Porto Allegre. Yet one reads in the newspapers about infant deaths in an overcrowded nursery in the public maternity hospital in the city of Rio, or receives a report on the lack of tuberculosis chemotherapy in a municipality of the state of Pernambuco, and learns of the 100% Caesarean section rate in a hospital in the State of Parana (Noranha & Rosa, 1999, p. 438).

Despite these concerns, these researchers nevertheless believe that considerable progress has been made as a result of reforms that the government instituted in the 90’s. They assert,

Only in the early 1990’s, more specifically from 1995, did quality of care initiatives become more and more widely disseminated throughout the country. This report tries to trace this new environment in Brazil where a growing

awareness of quality in healthcare can be detected among consumers, providers, financial planners and government representatives (p. 437).

Although the Constitution of 1988 gave everyone in the country the right to use any of the public health services in the country, in reality the public health system is estimated to serve only 70% of the people of Brazil (Lobato, 2000). At first, this statistic would seem to imply that 30% of the people in the country had no services; this is not correct. The remaining 30% receive healthcare via privately financed insurance plans. Although this still suggests a disparity in the level of care related to the ability to pay, at least some level of service does indeed seem to be available to all. Lobato (2000) goes on to describe the essential elements of the Unified Health System (UHS) that was begun with the 1988 Constitution. One important feature needed for a stable healthcare system is a stable source of funding that will not disappear when the political winds blow in a different direction. The UHS accomplished this critical goal by tying the system to the social security budget which, as in the U.S., is financed by compulsory contributions by both employers and employees. These funds account for about 55% of the total public health budget. In addition, supplementary funds are provided by federal, state, and municipal budgets. This financing also reflects the shared responsibility for the UHS. It is not just a federal responsibility or a state responsibility or a local responsibility, but instead is a joint responsibility of all levels of government. As in healthcare, funding works best with groups cooperating and coming together. Nevertheless, by 1995 these funding sources were not enough to meet the healthcare demands of the country, so in 1996 an additional special tax on banking transactions was imposed. (One wonders if such a tax could be enacted in the United States, given the powerful banking lobby.)

The contributions of both the public and private healthcare systems in Brazil can be seen in Table 7.

Table 7. Health facilities - Brazil, 1990.								
Classes	Public			Private			Total	
	n	%		n	%		n	%
Basic units	6 038	25.0		131	1.0		6 169	17.0
Health centres	14 129	59.0		189	2.2		14 318	40.0
Polyclinics	2 126	11.0		6 170	52.0		8 296	23.0
Emergencies	188	0.7		98	0.8		286	0.8
Hospitals	1377	6.0		5 155	43.5		6 532	18.0
Total	23 858	100.0		11 843	100.0		35 701	100.0
	(67%)			(33%)			(100%)	

Source: Fundação IBGE (1976, 1992)

The majority of hospitals and polyclinics are in the private sector, while the dominant mode of service in the public sector is regional health centers. These health centers typically have only a few beds, but offer a broad array of services to their typically poor patients including general care, minor surgery, and gynecological and emergency services. In Sao Paulo, 82% of the hospitals are in the private sector. But these numbers can be somewhat deceiving. Although it is true that most hospitals are in the private sector, this provides no information about the quality of the hospitals. Contrary to what might be expected, the best hospitals are apparently public hospitals. Lobato (2002) notes, “Public hospitals, particularly those that offer tertiary care are, however, better equipped and possess the most advanced technology.”

The Future of Healthcare in Brazil

Although Brazilians like to think of themselves as “the country of the future,” and although they have made significant gains in combating infectious diseases and establishing a unified healthcare system, many challenges remain. Brazil is still a country of enormous social disparities. Over 50 million Brazilians live in poverty, 32 million have no access to clean water, and many live in shantytowns (favelas), earning the minimum wage of \$77 per month (BBC, 2000).

A recent study conducted by the Sao Paulo Center for Health Economics at the Federal University of Sao Paulo warned that without substantial economic growth and more equitable distribution of income, the Brazilian health care system will be in chaos by 2025; there will be too few care givers and too few resources to provide care for everyone (Medical News Today, May, 2006). The study warns that merely to maintain current service levels, the country will have to devote 12% of its GDP to healthcare, which is a major increase over the current level of 7-8% of GDP. The study notes that, without changes to current income distribution trends, an increasing percentage of the population will not be able to afford private health care.

Summary

Although the Unified Health System appears to offer the promise of adequate, if not excellent, care for almost all people in Brazil regardless of income, the future success of the system may also require some changes in fundamental cultural attitudes. Specifically, the population may need to become better educated on where and how to access the services that are available. Reliance merely on “knowing someone” may need to decrease. As Lobato (2000) observed,

Health services reproduce a historical characteristic of Brazilian culture: access to benefits through personal relationships. Thus, for example, it may be as useful to a home-maker to have a neighbour who is a nurse or even a cleaner in an important public hospital, as it is for a senator to have a private doctor who is also the director of that hospital. Gender may make a difference. In the first case, the relationships are mainly established by women, and in the second by men. This may be explained by the fact that in the upper groups personal relationships are established within the public sphere, which is dominated by men, whereas, within in the lower groups, relationships are established in the private sphere, which is dominated by women. But by whatever means the relationships are established, they serve as ways for people to gain access to the hospital's benefits.

Although these personal relationships certainly have some value, having a friend in the right place should not be the sole determiner of whether quality care will be obtained. Bringing quality healthcare to all segments of society in Brazil will require educational efforts by both governmental as well as grassroots organizations.

Conclusion

Brazil is a very diverse developing country that has made clear progress in the quality of all aspects of healthcare in the last twenty-five years. Immunization programs for communicable diseases have been especially effective, and Brazil has made great strides with the AIDS problem, but AIDS is likely to be a problem for years to come. The Universal Health System has brought opportunities for quality care to all segments of society, even if it is not truly universal. From herbalists to shamans to healer-mediums to western medicine, Brazil houses a wide array of forms of (ethno)medical practitioners,

and all have made contributions to the delivery of healthcare in Brazil. Within this range of healers, one view does not necessarily take precedence over the others. As we have seen in countless other countries, the decision lies in the hands of the patient. But there are also warning signs. A growing population and continued inequalities by geography and economic status is something the healthcare system, and indeed all of the institutions in the country, will have to deal within the coming years.

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