Health Systems and Services Profile

Brazil

Monitoring and Analysis of
Health Systems Change/Reform

(February 2008)

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BRAZIL
HEALTH SYSTEMS AND SERVICES PROFILE

Monitoring and Analysis of Health Systems Change/Reform

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Acronyms

API	Annual Parasitic Index
ANS	National Supplementary Health Agency
ANVISA	National Health Surveillance Agency
BNDES	National Economic and Social Development Bank
CF 88	Federal Constitution of 1988
CIB	Bipartite Interagency Commission
CIT	Tripartite Interagency Commission
CNS	National Health Council
EC 29	Constitutional Amendment No. 29
ENSP	National Public Health School (Sergio Arouca)
EPHF	Essential Public Health Function
FNS	National Health Fund
FIOCRUZ	Oswaldo Cruz Foundation
FUNAI	National Indigenous Foundation
FUNASA	National Health Foundation
GDP	Gross Domestic Product
HDI	Human Development Index
IBGE	Brazilian Institute of Geography and Statistics
INAMPS	National Institute of Medical Care of Social Security
IPEA	Institute of Economic and Applied Research
MAS	Medical and Health Care Research, conducted by the IBGE
MDG	Millennium Development Goal
MEC	Ministry of Education
MF	Ministry of Finance
MPO	Ministry of Planning and Budget
MS	Ministry of Health
MSS	Municipal Health Secretariat
ONA	National Accreditation Organization
PAB	Basic health care package
PNAD	National Household Sampling Survey
PNS	National Health Plan
PPA	Multiyear Plan
PSF	Family Health Program
Reforsus	Program for Strengthening the Reorganization of the Unified Health System
RIPSA	Interagency Health Information Network
RNIS	National Health Information Network
SAMU	Mobile Emergency Services
SAS	Health Attention Secretariat
SC&T	Science, Technology and Strategic Input Secretariat
SE	Executive Secretariat
SES	State Health Secretariat
SEGETES	Work and Health Management Secretariat
SIM	Mortality Information System
SINASC	Live Births Information System
SIOPS	Public Health Budget Information System
SIS	Investment Management Secretariat (of the MS)
SVS	Health Surveillance Secretariat
SUS	Unified Health System

Executive Summary

Brazil began to reform its health sector immediately after the Constitution of 1988, which holds health as a universal social right and the State as responsible for ensuring conditions for its full exercise. In the last twenty years, various economic and social changes have occurred, and while a series of advances can be identified, many challenges still need to be addressed to reach the objectives. In recent years, inflation under control, a resurge in economic growth, income inequality reduction, and growth of formal employment in Brazil have steadily led to improved living conditions for most of the population, including health conditions, leading the government to consider it feasible to accomplish the Millennium Development Goals (MDGs).

In recent decades the country has experienced significant shifts in its epidemiological profile, with growing incidence of chronic diseases – now the leading cause of death – and the marked persistence of endemic and communicable diseases, especially in the North, Northeast, and Central-West regions. Infant mortality has fallen 40% from 1991 to 2003. However, inequalities in infant mortality rates are still significant among the population's different socioeconomic strata and different states. Maternal mortality was estimated at 76.1 deaths per 100,000 live births in 2004. Significant regional differences also exist. In the Southeast, where lower rates are observed, there were 43.2 maternal deaths per 100,000 live births.

Brazil's health system is mixed, segmented, and, in terms of funding sources, has two subsystems: one public and one private. The public subsystem has two segments: (i) one, which provides universal access and is free (all citizens have the right), comprehensively financed by public resources, called the Unified Health System (SUS); and (ii) the second, whose access is restricted to public employees (civilian and military), and is financed by public resources and contributions from beneficiaries. In the private subsystem, two segments also exist, both benefiting from some form of fiscal incentive: (i) one, comprised of the health plans and insurance, is known as the supplementary system, with voluntary non-mandatory affiliation, financed with resources from employers and/or employees (in case of group plans) or exclusively by the families; and (ii) a second, with direct access to private providers through payment at the time of service. For 75% of the population, access is ensured exclusively by the public system.

The average number of medical consultations per capita, according to a population study, was 2.4 per capita per year in 2003, with significant inequalities: urban populations reported 2.6, a significantly higher number than rural populations (1.8). Significant differences also existed in terms of levels of monthly family income: the per capita/year number of consultations varied from 2.2 among people earning less than or up to the minimum wage, to 3.1 for people earning more than 20 times the minimum wage. The same study revealed that 98% of people who sought care in the period studied were able to obtain it, and that only 2.2% reported having difficulties in accessing health interventions and services. In 2005, the Ministry of Health recorded 2.5 SUS consultations per capita.

Although Brazil does not have a national health accounts system, estimates indicate that in 2004 the total spending on health reached 8.8% of the total GDP and that the public spending in health was R$65.1 billion, only about 3.4% of GDP. The per capita public spending corresponded to US$121 current dollars, or US$306 PPP (dollar adjusted by purchasing power parity - PPP). Federal expenditure on drugs reached R$4.5 billion in 2005. Strategic and high-cost drugs, whose use must adhere to specific protocols, accounted for 66.4% of the federal expenditure on drugs in 2005. Family expenses remain high, and represented 13.9% of the average monthly expenses for lower-income families in 2003. Most of this expenditure – 58.9% – was spent on procuring drugs. In the higher socioeconomic brackets, the most important health expenditure item was payment of the monthly premium of health plans (37.9% of health expenditure), approximately 21.4% of a family's monthly average expenditure.

The delivery of public health system services is ensured by the public service network and private facilities, which supply much of the hospital services and support for diagnostic and therapeutic actions. Public facilities supply much of the public health actions and services and outpatient care. The public network is made up of 59,177 health facilities; of these, 47,110 (79.6%) provide outpatient care. In 2005, the country had 443,210 hospital beds in health facilities. Of these, only 34% belonged to public institutions. However, 88% of the hospital beds in Brazil are certified for use by the universal public system. Health service facilities, both public

and private, were responsible for 1.6 million jobs in 2005, including technical and auxiliary personnel and professional personnel.

Since the mid-1990s, basic care strengthening has been promoted as a strategy to reduce inequality in access and readjust the health care model, which was previously over-focused on hospital care. The most important mechanisms used for expanding coverage and reducing inter-regional inequalities were the basic health care package (PAB), a mechanism based on per capita resources, and the family health program (PSF). PSF offers health care to a given population in a given geographical area, through assignment to a multidisciplinary team, composed of at least one doctor, one nurse, nursing auxiliaries, and community health workers.

The public system offers services on a mass scale. In 2006, it reached 87 million people served by 27,000 family health teams, in 92% of the municipalities in the country. The system provided 2.3 billion outpatient procedures and 300 million medical consultations that year. SUS hospital care in 2006 recorded nearly 12 million hospitalizations, with an average stay of 5.9 days.[1] Approximately 15,000 transplants were performed and more than 200,000 heart surgeries.

There are, however, bottlenecks that need to be resolved and challenges to face. To guarantee universal access to comprehensive care and resolve difficulties in access to average complexity care, an investment policy in support of this objective is needed, focusing efforts to organize regional networks, expanding and improving the public service network. Improving the quality and effectiveness of available services involves efforts to ensure availability of equipment and inputs, certification and continuing professional development, as well as investments in improving relations among professionals, and between providers and users. For all this, it is essential to ensure an adequate flow of resources, which is needed to consolidate the advances already made and realize the improvements that still need to be made.

[1] MS/DATASUS.

THE HEALTH SYSTEM PROFILE OF BRAZIL[2]

1. CONTEXT OF THE HEALTH SYSTEM

With a total area of 8.5 million km², the Federative Republic of Brazil includes 26 states, the Federal District, and 5,560 municipalities. Each level of government has political, fiscal, and administrative autonomy, with exclusive and concurrent competencies and joint responsibilities.

The government has a presidential system. Its democratic rule of law has the fundamental purpose, established by the Federal Constitution of 1988: "i) *to establish a free, just, and collective society; ii) guarantee national development; iii) eradicate poverty and marginalization and reduce social and regional inequalities; and iv) promote the well-being of all, regardless of origin, race, sex, color, age, or any other feature."* (Article No. 3).

The country is divided in five large regions: North, Northeast, Southeast, South, and Center-West, with widely diverse climatic, social, and economic features.

The Amazon Forest covers most of the North. With 7 states and 449 widely scattered municipalities, the North's predominant economic activities include livestock and mining and the region has serious communication and transportation difficulties. With a total population of close to 13 million, the demographic density is less than 1 inhabitant/km². More than 50% of the country's indigenous population groups live in this region.

With 1,792 municipalities distributed in 9 states, the Northeast is home to 29% of the country's population, with the greatest demographic density along the coast and scattered population in the interior. The largest proportion of the country's poor population is here (55.3% of the population subsists on half the average minimum wage of per capita household income) and 53% of the country's rural population. The main economic activities include subsistence agriculture, extensive cattle-raising, and monocultures of sugarcane and cotton. In some states, industrial parks are becoming established, a result of offshore oil exploration.

The country's industrial activity is concentrated in the Southeast, as well as the major finance and service institutions. In the region's 4 states, which have 1,668 municipalities, 44% of the country's population live, 92% of which resides in urban areas, where the greatest proportion of formal employment can be found, with per capita average household income ranging between R$326.00 and R$501.00. Also, the highest schooling levels are attained: the average number of years of study in the Southeast's population 25 years old and older is the highest in the country (7 years). The region also has the country's largest metropolitan areas: São Paulo, Rio de Janeiro, and Belo Horizonte.

The 3 states in the South have a total of 1,188 municipalities and 15% of the population. The region has slightly better equality in income distribution (the Gini index is 0.522 compared to 0.564 in the Northeast), and the lowest illiteracy rate in the country (6.4% compared to 23.2% in the Northeast and 11.6% in the country overall).

The Center-West has 3 states, with 463 municipalities, and the Federal District, where the country's capital is located. Only 7% of the country's total population lives here. Its economy is based mostly on agrobusiness, especially soybeans and livestock.

[2] Text prepared by Elizabeth Barros at end of 2006, updated in 2007, final revision in February 2008, with collaboration of Ministry of Health specialists and consultants.

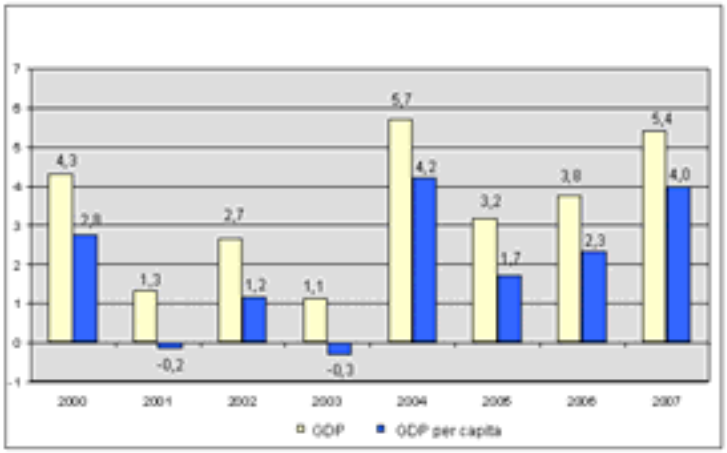
Figure 1: Demographic density (inhabitants/Km^2), Brazil, 2001

Source: IBGE Demographic Census 2000

1.1. Economic Context

The performance of the Brazilian economy, as seen in GDP (Gross Domestic Product) patterns, oscillated throughout the last decade. The annual real average GDP growth rate from 1995 to 2004 was 2.4%, and the per capita GDP was 0.9%. The growth rate in 2003 was 0.52%. There was a resurge in 2004, up to 5.2%, strongly influenced by industrial growth (6.2%), although this rate was not sustained in the following years. In 2005 and 2006, GDP growth rates were 3.5% and 3.7%, respectively, resulting in a per capita GDP of US$5,720. Economic growth accelerated in 2007, reaching 5.4% GDP growth rate.

Graph 1: GDP and per capita GDP growth rate (%), Brazil, 2000-2007



Source: IBGE, Directorate of Surveys, National Accounts Coordination.

Despite the robust fiscal effect of primary surplus production in 2005, at the end of the year the public sector debt was similar to the previous year (51.6% of GDP) and with a record absolute value (R$1 trillion). The record is due to interest payments, totaling R$157.1 billion, generating an absolute deficit of R$63.6 billion.

Efforts to stabilize the economy marked the last decade. Policies to control inflation and rein in public spending resulted in sluggish economic activity and higher unemployment rates. In 2003, almost 10% of the workforce was unemployed; in metropolitan areas, average unemployment rates reached 12.3%. In 2004, a distinct process of economic recovery began, and average unemployment rate fell by 11.5%.

The percentage of people 10 years old and older who are employed (occupation level) rose from 56.5% in 2004 to 57.0% in 2005. The total number employed grew significantly (2.9%), an increase in absolute terms of close to 2.5 million people, of which 52% were women. The greater participation of women in the employed population shows the growing influence of the process of incorporating women into the job market. From 2004 to 2005, the level of employed women rose from 45.6% to 46.4%, while that of employed men showed less significant growth, rising from 68.2% to 68.3%. The employed female population increased by 3.7% and the employed male population by 2.4% in the same period.

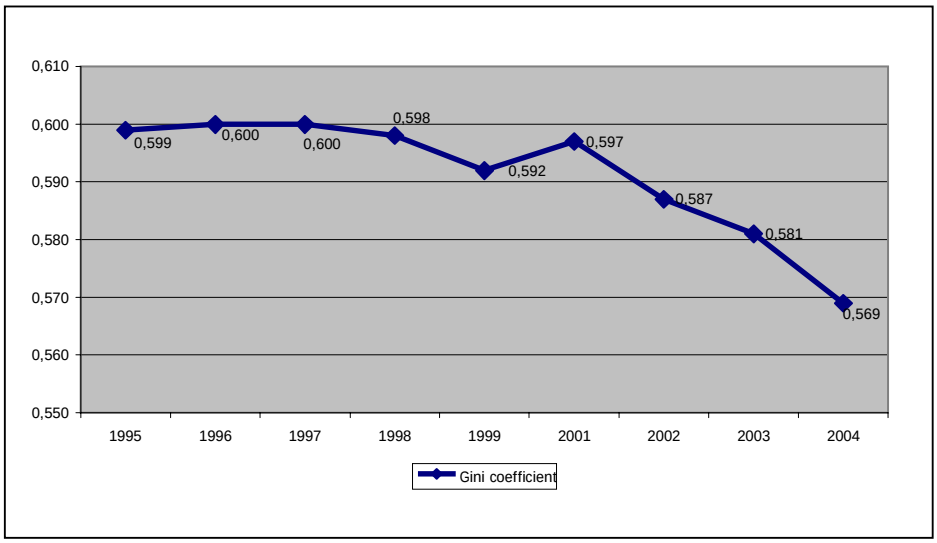
Table 1: Economic Indicators, Brazil, 1990-200

Indicador	1990	1995	2000	2005
GDP constant prices - R$ billion 2005**	1,338	1,557	1,738	1,937
GDP constant prices - US$ billion 2005**	549.44	639.37	713.69	795.41
GDP per capita at constant prices 2005 - US$**	3,750	4,025	4,169	4,320
Annual Inflation Rate**	350.35	20.41	5.83	5.55
Total Public Sector Debt as a % of GDP (Dec.)**	42.3	30.8	49.4	51.5
Economically Active Population - EAP Urban (thousands)*	50,593	54,844	63,419	69,805
Source: * IBGE; **IPEA				

Reduction in inflation and the gradual decline in interest rates led to an upsurge in the economy in 2005, with increasing employment and higher salaries, especially in the low-income population groups. But, according to the Brazilian Institute of Geography and Statistics (IBGE), although the average worker salary in 2005 showed real gain over the previous year, there was a real loss of 15.1% compared to 1996, the year in which average salary reached its highest peak since the beginning of the 1990s. Income inequality decreased slightly, with the perspective of a steady slow trend downward away from concentration of income. Income inequality in Brazil declined by 4%. The drop has been steady. The income of the poorest 20% in the country rose nearly 5% per year during this period, while the top 20%'s income fell 1%.

The Gini Coefficient applied to per capita family income fell from 0.599 in 1995 to 0.569 in 2004. However, according to the Ministry of Labor's general registry on employment and unemployment (CAGED), the income bracket earning more than 3 times the minimum wage (more than R$1,050) suffered a loss of almost 2 million formal job positions between 2000 and 2006, and in the same period, the pay for those who successfully held jobs with salaries over R$1,050 dropped 46% in real terms.

Graph 2: Gini coefficient: * Trajectory of inequality in per capita family income, Brazil, 1995-2004



Source: IPEA
* Gini coefficient: the closer to 0, the greater the equality; the closer to 1, the greater the inequality.

1.2. Social Context

1.2.1. Social determinants

The Human Development Index – HDI – is a synthesis of four factors: patterns of per capita GDP, life expectancy, the literacy rate of people 15 years old or older, and the overall enrollment rate in the three levels of schooling (the relationship between the school-aged population and the number of individuals enrolled in elementary school, middle school, and high school). Between 2005 and 2006, the main change in HDI calculation occurred in this last indicator. In previous estimates, data from 32 countries (such as Brazil, Argentina, the United Kingdom, and Sweden) included adult education programs. Now these numbers have been excluded to make the calculations more precise in comparison with other countries. Despite this change, Brazil's HDI rose: from 0.788 in 2003 to 0.792 in 2004, which means the country remains among the 83 nations with average HDI (between 0.500 and 0.799), thus outside the group of 63 countries with high human development, which places Norway in the top for the sixth consecutive year (HDI: 0.965).

Table 2: HDI: Position of Brazil in 2005-2006 ranking

	HDI Income	HDI Education	HDI Health
Brazil	0.74	0.88	0.76
Latin America	0.73	0.87	0.79
World	0.75	0.77	0.71
Rich countries	0.96	0.98	0.90

A significant proportion of the Brazilian population still lacks adequate housing. Housing structure is classified as rustic[3] in 2.4% of the country's dwellings. The percentages are higher in the North (6.0%) and Northeast (5.6%). In the Southeast, only 0.6% of dwellings are rustic. Access to treated water has risen in recent years, but almost 17% of the dwellings still are not connected to the water supply system. Sewerage disposal is considered by the IBGE to be adequate when a septic tank is available or there is connection to a sewerage system. Almost

[3] Dwellings labeled "rustic" are those with external walls made of materials classified as non-durable, since they are inappropriate for construction (packing crate wood, mud, adobe, straw, etc.).

30% of permanent households do not yet have these conditions. Sewerage service remains the greatest challenge: although the sewerage system is continually expanding, it is still the service with the least coverage: it rose from 45.4% in 2001 to 49.0% in 2005. Solid waste collection and electricity are the services with the most extensive coverage: in 2005, they served 86.8% and 97.7% of permanent households, respectively.

Table 3: Services in permanent households in Brazil (percentage of total), 2001 and 2005

Service	2001	2005
Adequate sewerage disposal	66.8	70.4
General water supply system	81.1	83.4
Garbage collection service	83.2	86.8
Electricity	95.6	97.7

Source: IBGE, PNAD 2005

The illiteracy rate for people 10 years old and older is 10.2% and for people 15 years old and older is 11.1%, down from 14.7% in 2001. This indicator varied from 5.4% in the South to 20.0% in the Northeast and 10.7% in the North. The illiteracy rate in the 10-14-year-old age group dropped from 9.9% in 1995 to 3.2% in 2005, as a result of educational policy efforts, especially in the last decade. In the Northeast, where illiteracy rates are highest, the rate fell from 23.9% in 1995 to 7.0% in 2005.

Schooling levels for both genders were similar in 2005, although the level for females was still slightly higher than that for males. In the 5-17-year-old age group, the percentage of people not attending school was 9.1% for males and 8.4% for females. Access to high school continues to be faulty: for 15-17-year olds, 18.8% of males and 17.8% of females did not attend school.

The average number of years of schooling for the population group 10 years old and older (6.7 years) was less than that observed for the employed group (7.4 years). For the population group 25 years old and older, the average number was 6.6 years and for employed people in this age group, 7.2 years. Approximately 27.2% of people 10 years old and older completed more than 11 years of school. Also, the numbers for women are higher: 28.9% of the female population completed 11 or more years of study, compared to only 25.5% of men. In the employed population, 41.5% of women and 31% of men completed 11 years or more of study.

1.2.2. Demographics

Brazil had a population of 184 million inhabitants in 2005, with 83% residing in urban areas. Approximately 49% of the population was male and 51% female. The number of women surpassed that of men in all regions of the country and this disproportion was greater in the older age groups: while in the total population the number of females surpassed the number of males by 5.2%, in the 60-year-old-and-older age group the percentage was 28%.

Population information on color or race is generated by self-declaration. Half of the total population defined themselves as white, while 49% defined themselves as black or mulatto. In rural areas, this percentage rose to 61%. Significant regional variations exist in the composition by color or race. White people accounted for 58.5% of the population in the Southeast and 80.8% in the South. Brown and black people predominate in the North (71.5%) and Northeast (63.1%). Distribution is more well balanced in the Center-West (49.9% black and mulatto).

According to the IBGE (PNAD 2005), indigenous people (353,000 Brazilians) make up 0.19% of the population. However, the National Indigenous Foundation (FUNAI) estimates that the indigenous population is close to 460,000, distributed among 225 indigenous communities, which would raise the percentage to nearly 0.25%.

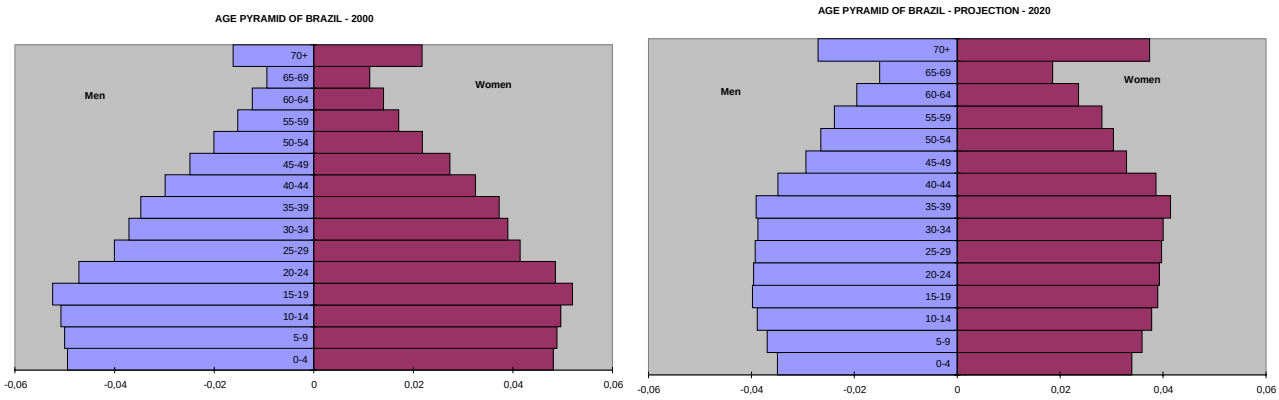
The national age pyramid is shifting rapidly. In 2005, the under-14 population group was 26.5%, while the over-60 group was 9.7%. The trend is toward aging. IBGE estimates show that by 2050 the country will have nearly 260 million inhabitants, with the under-14 group dropping to 18% and the over-60 group rising to 18%.

The dependency rate, which was 73.2 in 1980, fell to 54.4 in 2000, and was estimated at 50% in 2005. The main factors responsible for this decrease were the sharp drop in the fertility rate in recent decades, causing narrowing at the base of the age pyramid and rapid aging of the population. In the Southeast, the number of people 60 years old and older in 2005 was already 58% higher than the number of children 5 years old and younger. In the country as a whole, the number of elderly (60 years old and older) in 2005 was 24.2% higher than the number of children 5 years old and younger.

The average annual growth rate of the population, in the 1991-2000 period, according to the 2000 demographic census, was 1.63%. The average growth rate of the population has been steadily declining since the 1960s, when it was 2.89%. Between 2000 and 2004, the population increased by 1.7%. The fertility rate in 2003 was 2.1 live births per woman.

Average life expectancy at birth, which in 1991 was 66 years (62.6 for men and 69.8 for women), rose in 2004 to 72 years (68 for men and 76 for women). IBGE projections estimate that in 2050, life expectancy at birth will be 81.3 years. In the South, average life expectancy was the highest in the country, reaching 74 years, and in the Northeast it was the lowest (69 years). The difference in life expectancy between men and women has been growing in recent years, mainly due to the increase in the number of violent deaths of which young people are victims (mainly males in the 15-24 year-old range). External causes were responsible for 72.1% of the deaths among young people in this age group in 2004.

Figure 2: Age pyramid in Brazil, 2000 and 2020



Source: IPEA

1.3. Main health problems

In recent decades, the country's epidemiological profile has shifted significantly, with increasing incidence of chronic diseases (now the leading causes of death), and serious persistence of endemic and communicable diseases in morbidity statistics, especially in the North, Northeast, and Center-West.

1.3.1. Deaths and Causes

The 5 leading causes of death in 2004 were the same as the ones observed in the early 1990s: circulatory diseases (31.8% of deaths with defined cause), neoplasms (15.7%), external causes (14.2%), respiratory diseases (11.4%), and infectious and parasitic diseases (5.1%). Only a change in order occurred: external causes, which in 1998 were the second-leading cause of death, fell to third place, behind the growing incidence of neoplasms. Deaths from malignant neoplasms in 2004 reached 76.6 per 100,000 population. That same year, deaths from external causes reached 70.2 per 100,000 population and affected mainly young people in the 15-24 year-old age group, accounting for 72.1% of all deaths in that age bracket. External causes are also a factor of strong pressure on hospitals, as 6.6% of hospitalizations in the Unified Health System (SUS) in 2004 were due to external causes.

Infant mortality fell 40% in the last decade (to 24.1 per 1,000 in 2003) and the rate continues to decline especially due to the drop in postneonatal mortality. The rate fell throughout the country, decreasing from 47.1 to 22.6 deaths per 1000 live births from 1990 to 2004. The drop in numbers of deaths was relatively greater in the North and Northeast states, where initial levels were extremely high. Significant regional differences still exist: the rate in the Northeast (35.5 per 1,000) is more than double that observed in the South (15.8 per 1,000) and Southeast (15.6 per 1,000). Broader access to health interventions and sanitation has been identified as the main reason for the confirmed downward trend.

Nearly two-thirds of deaths occur in the neonatal period and are strongly associated with the quality and coverage of medical-hospital care. Early neonatal mortality remains high and varies significantly among regions: in 2003, it was calculated at 12.1 deaths per 1,000 live births in the 0-6-day age bracket for the country, the rate was 17.5 in the Northeast and 7.6 in the South. The infant mortality rate from avoidable causes fell from 4.4 to 3.6 deaths per 1,000 live births, mainly due to the reduction of vaccine preventable diseases (66.7%), avoidable deaths through early diagnosis and adequate treatment (50.5%), and preventable diseases through health promotion activities (56.3%).

There was no significant reduction in preventable diseases due to prenatal and maternity care. However, the mortality information system's coverage was expanded and the quality of the reporting of cause of death improved, with statistics on ill-defined deaths dropping from 12.8% in 1996 to 6.9% in 2004. In the North and Northeast, the rate of ill-defined deaths in children under 1 year of age remains above 10%.

For children under 1 year of age, disorders in the perinatal period remain the leading cause of death, followed by infectious and parasitic diseases (8.5%), respiratory system diseases (7.5%), and external causes (1.9%). Low birth-weight was observed in 8.3% of live births in 2003.

Inequality in infant mortality rate is significant among the population's different socioeconomic strata and among the different states. In 1990, the difference in risk between the states with highest and lowest infant mortality rates was four times and, in 2004, although maximum and minimum values have shifted, the difference remained practically the same.

Proportional mortality in children under 5 years of age from acute diarrheal diseases accounted for 4.3% of deaths and from acute respiratory infection for 5.7% of deaths in this age group in 2003.

In 2004, maternal mortality was estimated at 76.1 deaths per 100,000 live births. In the South, where the rates are lowest, these values reach 43.2 deaths per 100,000 live births.

1.3.2. Neoplasms and circulatory system diseases

Brazil has population-based cancer registries (RCBP), which make it possible to monitor and describe the profile of incidence since the 1960s. By the 1980s, statistics began to include information that could help assess quality of care. These broad databases, although still growing, continue to be concentrated in the country's largest cities. The cancer registries show that the incidence of cancer in Brazil is growing at a rate that accompanies the aging population due to the increase in life expectancy.

One estimate indicated that there would be 472,000 new cases of cancer in Brazil in 2006, or 355,000 excluding cases of non-melanoma skin tumors, which is almost 2 new cases per 1,000 inhabitants per year. The highest incidence of cancer, except for non-melanoma skin cancer, are prostate, lung, and stomach cancer for men; and breast, cervix, and intestinal cancer for women. In terms of mortality, 141,000 deaths were reported in 2004. Lung, prostate, and stomach cancer were the leading causes of death from cancer for men; breast, lung, and intestinal cancer for females.

The incidence of malignant neoplasms has spread in all regions. In 2005, 52.9 new cases of female breast cancer per 100,000 women were reported, and 22.1 new cases of cervical cancer per 100,000 women. There were 51.1 new cases of prostate cancer per 100,000 men. Late diagnosis leads to the high mortality associated with these types of cancer: there were 10.3 deaths from breast cancer per 100,000 women (in the South and Southeast,

13 deaths per 100,000 women); 4.6 deaths from cervical cancer per 100,000 women, and 10.2 deaths from prostate cancer per 100,000 men (12.2 in the Southeast and 13.2 in the South).

The incidence of other types of cancer is also high: in 2005, 62 new cases of non-melanoma skin cancer were reported per 100,000 men and 72 new cases per 100,000 women; 18.9 new cases of lung, trachea, and bronchia cancer were reported per 100,000 men and 9.3 new cases per 100,000 women. And 16.7 new cases of stomach cancer were reported per 100,000 men and 8.6 per 100,000 women.

Deaths from malignant neoplasms reached 74.3 per 100,000 population for the entire country, varying widely from region to region: in the South there were 106.1 deaths per 100,000 population and 91.1 in the Southeast (2005).

In 2005, the SUS recorded 423,000 hospitalizations due to malignant neoplasms, and 1.6 million outpatient consultations in oncology. Nearly 128,000 patients per month received chemotherapy and 98,000 received radiation treatment. In the last 5 years, the number of cancer patients receiving medical care in the SUS special care units has steadily increased, which could indicate an improvement in the system's capacity to expand access to specialized treatment resources, despite the bottleneck existing in some specialties, and the difficulties of regulation and articulation among the units in the network.

Circulatory diseases were responsible for 10.5% of hospitalizations in 2005, according to the SUS, and for 46.5 deaths from ischemic heart diseases per 100,000 population and 49.7 deaths from cardiovascular system diseases (2005).

1.3.3. External causes: violence and accidents

In 2003, 106,814 deaths were from external causes. More specifically, 44.1% resulted from assaults (72.2% of assaults were by firearm) and 25.5% from transportation accidents.

Among men, 44.1% of deaths from external causes were due to assaults. Among women, the most common cause of death from external cause was transportation accidents (32%). The number of males who died from aggression by firearm in 2003 was 12 times higher than that observed for women. The mortality rate due to aggression by firearms in men aged 15 to 29 practically quintupled between 1980 (17.1) and 2003, when it reached 82.8 deaths per 100,000 men. The highest rates were found in Pernambuco (89.8), Rio de Janeiro (84.4), and Espírito Santo (68.8). The lowest rates were in Piauí (9.3) and the Amazon region (10.2).

Of the 33,000 deaths from ground transportation accidents reported in 2003, 81% were men.

1.3.4. AIDS

It is estimated that 500,000 people in Brazil are carriers of the human immunodeficiency virus – HIV. From 1980 to July 2005, some 325,202 cases of AIDS were reported, 70% of which were men and 30% women (in 2000, approximately 25.6% of cases were female). There were 17 cases of AIDS per 100,000 population in 2004. This indicator has been increasing among women and the male/female ratio of cases dropped from 18.9/1 in 1984 to 1.5/1 in 2004, reaching 0.9/1 among adolescents in the 13-19-year-old age bracket. The spread of the epidemic, besides rising faster among women, has also shown two other significant trends in recent years: the penetration into the country's interior and the impoverishment of those affected. Nearly 50% of the Brazilian municipalities have already reported cases. The numbers of cases are increasing in the segments of society with lower levels of schooling and poorer socioeconomic conditions, as well as in the smaller cities (< 50,000 inhabitants).

In 2003, 11,276 deaths from AIDS were reported, 2% more than the previous year, but the specific mortality from AIDS remained stable at 6.4 deaths per 100,000 population in 2003 (compared to 9.7 deaths per 100,000 population in 1995). The largest drop in the 1995-2003 period occurred in the Southeast, where the greatest number of cases were found, with a 43% reduction in rate. This extreme drop in mortality is attributed to the introduction of antiretrovirals in the public health network with universal access through a decentralized network of services. However, even in this region, serious inequalities persist: death rates are higher for black women (12.29 per 100,000 population) than for white women (5.45).

1.3.5. Tuberculosis

The incidence rate of tuberculosis (including all forms) has been dropping in the last ten years, but still it remains high: 81,000 new cases were reported in 2003, or 45.2 new cases per 100,000 population (down from 58.4 in 1995), with significant incidence in the Southeast and Northeast (44.4% and 30.9%, respectively, of all new cases reported in the country). The largest gross rate of TB incidence (all forms) was observed in the North (51.7). The incidence is greater among men (64% of all new cases reported). The proportion of new cases of pulmonary TB and bacilliferous pulmonary TB as part of the total remained relatively stable in recent years, at 85% and 54% of new cases, respectively. The risk of dying from tuberculosis also varies significantly according to color: in 2003, the crude death rate due to tuberculosis for white people was 1.9 deaths per 100,000 inhabitants (and 3.0 for men), while for brown-skinned individuals the rate was 2.7, and for black people, 6.3. The risk of dying from tuberculosis was 2.5 times greater for the black population than for white population.

1.3.6. Malaria and dengue

Malaria persists as a significant health problem, although it varies from region to region. Although in 2004 the Annual Parasitic Index (API) for malaria was 2.6 positive exams per 1,000 population, exposure was highest in the North, where the largest risk is found (30.8 positive exams per 1,000 population). In the South and Southeast, no positive case was recorded.

The incidence rate of dengue has increased considerably since 1993 when it was 4.9 new cases per 100,000 population. The last epidemic peak of dengue occurred in 2002, due to the introduction of DEN-3, when 794,219 thousand cases were reported (455 new cases per 100,000 population), mostly in Rio de Janeiro. This outbreak led to implementation of the National Dengue Control Plan, leading to a significant reduction in the following years, although the rates remained high (65.6 new cases per 100,000 population in 2004). In the following years, the spread of DEN-3 in other states of the country caused the emergence of outbreaks and epidemics, without affecting the 2002 levels. In 2004, 117,500 cases of dengue were reported, 100,000 of which were distributed evenly in the North, Northeast, and Southeast. In 2006, 345,922 cases were reported, mostly in the Southeast (141,864 cases) and Northeast (105,017 cases). The Health Surveillance Secretariat of the Ministry of Health (SVS/MS) recorded 438,949 cases of classic dengue between January and July 2007.

As a result of these epidemic patterns, the number of reported cases of hemorrhagic dengue fever, a more serious form of the disease, also increased proportionally: there were 2,714 cases in 2002 and 727 in 2003. In 2004 and 2005, the rates dropped significantly, but still 107 and 103 cases, respectively, were reported. In 2006, 682 cases and 76 deaths were reported, and by July 2007, there were 926 reported cases of hemorrhagic dengue fever and 98 deaths. SUS monitoring shows that 93 municipalities, with a population of 36.5 million inhabitants, had a household infestation index of greater than the 1% parameter. Most of these localities are in the Center-West and Southeast.

Table 4: Mortality from various causes, Brazil, 1995, 2000, and 2003-04

Indicators	1995	2000	2003/4
Total mortality	7.19	6.54	6.01
Maternal mortality	51.61	70.91	76.09
Mortality from communicable diseases	60.06	45.03	47,26
Mortality from TB	3.84	3.26	2.74
Mortality from AIDS	9.73	6.32	6.07
Mortality from intestinal infection	7.54	3.62	2.98
Mortality from ischemic heart disease	44.86	46.21	46.48
Mortality from cerebro/cardiovascular diseases	52.39	49.89	49.74
Mortality from malignant neoplasms	61.93	70.14	76.62
Mortality from external causes	73.73	69.73	70.2

Source: RIPSA, IDB 2006. Note: Total mortality: deaths per 1,000 population. Specific mortality: deaths per 100,000 population. Maternal Mortality: maternal deaths per 100,000 live births.

1.4. Health service access and coverage

The most recent data available (2003) for the entire population indicated an average number of per capita medical consultations of 2.4 per year. These were concentrated in the 0-4-year-old age group (3.4) and 65-year-old-and-older age group (4.1). Urban populations had a significantly higher number of per-capita medical consultations (2.6) than rural (1.8), but there were significant differences in terms of monthly family income levels. Thus, the per capita/year number of consultations varied from 2.2 among people with income up to 1 minimum wage, to 3.1 for people earning more than 20 times the minimum wage. Women made a greater number of per capita medical appointments (3.0) than men (1.9).[4] The Ministry of Health recorded 2.5 consultations per capita offered through the SUS in 2005.

The percentage of pregnant women who have at least seven prenatal consultations is 22.5% in the entire country. However, significant regional differences exist: in the Southeast, care reaches 64% of pregnant women, but in the North, only 24% get adequate care. Racial inequalities are also apparent: only 37% of pregnant black women receive the adequate care of seven or more prenatal visits, compared to 62.5% of pregnant white women. The proportion of hospital childbirths in 2004 was 96.8%, reaching 99% in the Southeast, South, and Center-West.

Access to dental services has been a major challenge for the Brazilian health system. It was practically absent from the spectrum of health policies until 2003, when the “Smiling Brazil” program was established. Among other measures, the program provides the establishment of oral health teams to help steadily expand access for the population, which until then had to rely almost entirely on private dental services. Household surveys conducted in 2003 detected that 15.9% of Brazilians (close of 28 million people) reported they had never had a dentist appointment. The proportion was 81.8% in children under 5 years old, and 22.1% in the 5-19-year-old group. Among people over 64 years old, 6.3% have never been to a dentist. The gender difference was also significant: 17.5% of men and 14.3% of women reported never having been to a dentist. In the urban population, the number was 13.6%, and in the rural population, 28.0%. Income inequality was decisive in the access differential: 31% of the population earning monthly family incomes of the minimum wage or less report that they have never had a dentist appointment, and this statistic fell to 3% for those with monthly family income of more than 20 times the minimum wage.

1.5. Millennium Development Goals (MDGs)

The Brazilian government estimates that it can accomplish most of the MDG goals set for 2015. In some cases, the improvements of selected indicators seen in recent years is a result of progress in improved data recording (for example, maternal mortality) or expansion of service coverage, making it possible to increase detection capacity and service availability for citizens (for example, breast and uterine cancer).

[4] IBGE, PNAD Health 2003.

Table 5: Millennium Development Goals

GOAL	U.N. GOAL	BRAZIL GOAL	Indicator	Previous	Current
GOAL 1 • Eradicate extreme poverty and hunger	**Objective 1**: To halve, by 2015, the proportion of the population whose income is less than 1 dollar PPP per day	**1A:** Reduce to one-quarter, between 1990 and 2015, the proportion of the population whose income is less than 1 dollar PPP per day.	Percentage of the population living on less than U$1.0 PPP per day (1990/2003)	9.90%	5.70%
	Objective 2: To halve, by 2015, the proportion of the population who suffer from hunger	**2A:** Eradicate hunger between 1990 and 2015.	Percentage of children 1-2-years-ild with protein-calorie malnutrition (1999-2004)	19.80%	7.70%
GOAL 2 • Achieve universal primary education	**Objective 3:** Ensure that, by 2015, children everywhere, boys and girls alike, finish a complete teaching cycle.	**3A:** Ensure that, by 2015, the children in all regions of the country, regardless of color/race or gender, complete elementary school.	Rate of school attendance for 7-14-year-olds in elementary school (1992-2003)	81.40%	93.80%
GOAL 3 • Promote gender equality and empower women	**Objective 4:** Eliminate the disparities between the sexes in elementary and middle school, if possible by 2005, and at all levels of teaching, at the latest by 2015.	**Objective 4:** Eliminate gender disparities in elementary and middle school, if possible by 2005, and at all levels of teaching, by 2015 at the latest.	Rate of school attendance for 15 - 17-years-olds in middle school, by gender (1992-2003)	M = 15.1 F = 21.3	M = 38.1 F = 48.2
GOAL 4 • Reduce child mortality	**Objective 5:** Reduce in two-thirds, from 1990 to 2015, mortality of children under five.	**Objective 5:** Reduce by two-thirds, between 1990 and 2015, the mortality of children under five.	Mortality of child under 1 year old per 1,000 live births (1996-2004)	33.2	22.58
GOAL 5 • Improve maternal health	**Objective 6**: Reduce to three-quarters, from 1990 to 2015, the maternal mortality rate.	**Objective 6A:** Promote, in the SUS network, by 2015, universal coverage for sexual and reproductive health activities.	Proportion of the female population 15-49-years-old using contraceptive methods (1996)	55.4	**...**
		Objective 6: Reduce by three-quarters, from 1990 to 2015, maternal mortality rate.	Rate of maternal mortality per 100,000 live births (1996-2004)	51.61	76.09
		Objective 6B: By 2015, to have stopped the growth of mortality from breast and cervix cancer, reversing the current trend.	Specific mortality from malignant neoplasms -- breast cancer and cervical cancer (1990-2004)	breast = 7.90 uterine= 3.82	breast = 10.60 uterine= 4.76
GOAL 6 • Combat HIV/AIDS, malaria and other diseases	**Objective 7:** By 2015, stop the spread of HIV/AIDS and begin to reverse the current trend.	**Objective 7:** By 2015, to have stopped the spread of HIV/AIDS and begun to reverse the current trend.	AIDS incidence rate per 100,000 pop. (1995-2005)	13.25	15.05
	Objective 8: By 2015, to have stopped the incidence of malaria and other important diseases and begun to reverse the current trend.	**Objective 8A:** By 2015, to have reduced the incidence of malaria and tuberculosis.	Tuberculosis incidence rate (1990-2005)	51.75	43.78
		Objective 8B: By 2010, to have eliminated Hansen's disease.	Rate of prevalence of Hansen's disease (cases per 10,000 population) (1990-2005)	19.54	1.48

Source: IPEA; MS; RIPSA/IDB 2006.

2. FUNCTIONS OF THE HEALTH SYSTEM

2.1. Characterization of the Health System

The health system in Brazil is mixed, segmented, with financing sources in two subsystems: one public and one private.

The public subsystem has two segments: (i) one provides free universal access (all citizens have the right), fully financed by public resources, called the Unified Health System (SUS); and (ii) the other has restricted access to government employees (civilians and military), financed with public resources and employee contributions.

In the private subsystem there are also two segments, both benefited by some type of fiscal incentive: (i) one provides health plans and insurances, and is known as the supplementary system; it is voluntary participation, non-compulsory, and financed with resources from employers and employees (in the case of company group plans) or exclusively by the families; and (ii) the second offers direct access to private providers by means of payment at the moment of receiving care.

For 75% of the population, access is ensured exclusively by the public system, and the population covered by the private system also benefits from the public network through public health activities, and some also use it for more complex or costly procedures.

2.2. Leadership (Steering Role)

2.2.1. Mapping of the Health Authority

In the Brazilian federative model of political-administrative organization, the Union, the states, the Federal District, and the municipalities are autonomous and exercise exclusive and concurrent responsibilities. Among the concurrent responsibilities are those in the field of health in which some functions are established by law (Law No. 8080/90 and Law No. 8142/90) while others are shared, with each sphere's responsibilities established through negotiation and agreement processes.

The Ministry of Health oversees national management of the SUS as established in Articles No. 198 and No. 200 of the Federal Constitution. Through the Ministry of Health and the National Health Council (CNS) and in coordination with other federal agencies, the Union is responsible for the functions[5] of formulating guidelines and national goals; financing; coordinating, monitoring, and evaluating the system's operations and establishing technical standards in health; the national coordination of health and epidemiological surveillance systems and health information systems; formulating and implementing national policy on production of inputs and equipment and blood and blood products; executing health surveillance actions at ports, airports, and borders; implementing the indigenous health policy; the certification and quality control of drugs and sanitary products, procedures, and substances of health interest; regulation, oversight, and control of private health services; participation in formulating and implementing national policies on basic sanitation and the environment.

The SUS is made up of subsystems at the state and municipal levels. Legislation assigns the municipalities the basic responsibility for implementing health actions and providing services to meet the health needs of their respective populations, with technical and financial cooperation from the Union and the states. At the state level, the SUS is managed by the health secretariat of each state government, which coordinates and administers strategic resources, and executes supplementary activities and services.

The SUS management pact defines the public health system management responsibilities of the Union, states, and municipalities. The financing of health activities and services is the shared responsibility of the three government spheres, as stipulated in the Federal Constitution. The management pact establishes the role of each government agency in system management; regionalization; planning and programming of activities; regulation, control,

[5] Law No. 8080/90, Article 16.

evaluation, and auditing; guarantee of social participation and control; management of work and education issues in health.

Universal access to comprehensive health care is ensured through the operation of regionalized networks that integrate the municipal and state networks under the coordination of state entities, which ensure referrals to all levels of complexity. The municipality is in charge of managing the whole network of basic public health care services, encompassing its own units and those transferred by the state or by the Union.

Intersectoral activities and programs are implemented by the three government spheres through formal contracts and agreements. Joint intersectoral actions are ensured at the federal level by the Ministry of Health's participation in forums such as the national council on rural development (CNDR); the national council on food and nutritional security (CONSEA); the management council of the *Bolsa Familia* program (CGPBF); the national council on women's rights (CNDM); the national council on the rights of the elderly (CNDI); the national council of the rights of children and adolescents (CONANDA); the national council for social welfare (CNAS); the national council on the environment (CONAMA), and the national council for promotion of racial equality (CNPIR).

The Ministry of Health (MS)

The MS has the responsibility of steering the health system by assigning responsibilities among five specific Secretariats and the Executive Secretariat (SE), which is responsible for supervising and coordinating activities related to the planning and budgeting federal systems, administrative organization and modernization, accounting, financial administration, administration of information and informatics resources, human resources, and general services, within the scope of the Ministry. The SE is also responsible for monitoring public health expenditure through the Public Health Budget Information System (SIOPS).

Furthermore, the SE is responsible for supervising and coordinating the activities of the internal management systems and the information systems for current SUS activities, as well activities of the National Health Fund (FNS), Datasus, and the SUS card. It is also in charge of strengthening relations with states and municipalities in defining and implementing programs. It exercises the role of sectoral leader of the Federal Administration Civil Personnel System (SIPEC), Administration Organization And Modernization System (SOMAD), Information and Informatics Resource Management System (SISP), General Services (SISG), Federal Planning and Budget System, Federal Financial Administration System, and Federal Accounting System, under the Subsecretariat of Administrative Matters and the Subsecretariat of Planning and Budget.

Figure 3: Basic organizational structure of the Ministry of Health

The Health Care Secretariat is made up of the departments of Specialized Care; Regulation, Evaluation, and Control; Basic Care; and Strategic Programming Activities, which are responsible for formulating and implementing policies on basic and specialized care. It is also responsible for designing the policy on assistance regulation, monitoring and evaluating care delivery, defining criteria for the systematization and standardization of techniques and procedures in the areas of control and evaluation, as well as keeping the National Health Facilities Census (CNES) up to date.

The Secretariat of Science, Technology, and Strategic Inputs is responsible for formulating and implementing national policy on science, technology, and innovation in health; and on pharmaceutical assistance and drugs, which includes blood derivatives, vaccines, immunobiologicals, and other related inputs. These policies are articulated and cross-cutting in order to help promote industrial development through activities that foment innovation and research of interest to the SUS and development of the industrial complex in health.

The Secretariat of Work and Education Management in Health (SEGETES) is responsible for actions designed to regulate and promote technical training, both graduate and postgraduate, in connection with the Ministry of Education (MEC) and the process of continuing education for SUS health workers, based on the population's health needs.

The Strategic and Participatory Management Secretariat, through its two departments (the Participatory Management Support Department and the Monitoring and Evaluation Department of the SUS), has, among its responsibilities, formulating and implementing policy on democratic and participatory management of the SUS and strengthening social participation; articulating the Ministry of Health's activities in terms of strategic and participatory management with the various governmental and nongovernmental sectors related to health determinants; formulating and coordinating the Ombudsman Policy for the SUS; conducting audits and controls in the SUS and coordinating the implementation of the SUS national auditing system.

The Health Surveillance Secretariat (SVS) is responsible for epidemiological and environmental surveillance activities. Among its responsibilities, it coordinates the communicable disease prevention and control actions, including the national programs to combat dengue, malaria, and other vector-borne diseases, the national immunization program, and surveillance of emerging diseases. In addition, the SVS includes important national programs to combat diseases such as tuberculosis, Hansen's disease, viral hepatitis, STDs, and AIDS. The SVS is also responsible for coordinating SUS activities on environmental surveillance and risk factor surveillance of noncommunicable diseases.

2.2.2. National Health Policy

The principles and guidelines that guide the elaboration of the National Health Policy and the health care provided by the SUS are defined in the Federal Constitution of 1988 and in specific legislation (Laws No. 8080/90 and No. 8142/90). Constitutional regulations also determine that in general all federal government activities be developed based on multiyear plans, prepared every four years and approved by the National Congress.

The multiyear plan PPA 2004-2007 defines 18 priority issues for the federal government in the area of health: 1. Phytozoosanitary safety; 2. Investment in science, technology, and innovation to promote competitive import substitution in strategic areas; 3. Sanitation; 4. Popular Pharmacy program; 5. Improvement of quality care (Qualisus); 6. Monitoring, evaluation, and control of health actions and financial resources transferred to states, municipalities, and institutions in the context of the SUS; 7. Regulation of the Constitutional Amendment 29, which establishes SUS resource allocation; 8. Oral health (through the "Smiling Brazil" program); 9. Mental health; 10. Women's health; 11. Control of Hansen's disease and tuberculosis; 12. Organ transplants; 13. Professional civil service in health; 14. Ensuring greater SUS sufficiency in production of blood derivatives, immunobiologicals, and drugs; 15. Indigenous health; 16. Approval of the national health plan; 17. Designation of SUS management and regionalization; and 18. Improvement of the quality of care in private health plans.

The PPA also defines the following criteria to establish strategic activities in the area of health: (i) present relevant epidemiological risk/impact; (ii) comply with international agreements and commitments; (iii) serve strategic populations and especially those at-risk; (iv) support

decentralization/regionalization of SUS activities; (v) provide significant volume of resources; and (vi) be original, thus requiring accurate monitoring to promote adjustments as necessary.

The National Health Plan[6] (PNS) was debated in regional seminars, with the participation of different stakeholders and approved by the National Health Council in 2004. The document provides explicit guidelines for health system activities during the 2004-2007 period, on: a) reorganization of health care, with a view to improving the quality and increasing access to comprehensive care and strengthening the system's regulatory capacity; b) health conditions, identifying a variety of activities to prevent and control the most prevalent diseases, and activities aimed at providing adequate protection for the most vulnerable groups (women and children, adolescents and young adults, the elderly, black and indigenous populations, persons with disabilities, workers, and the prison population), as well as increasing strategic activities (oral health, mental health, healthy nutrition, communicable diseases control, and environmental surveillance); and c) health sector management, including improvement of access to and quality of care, sustainable financing, strengthening social participation processes, and participatory management practices, as well as monitoring, evaluating, and control of health activities and use of financial resources by the SUS, and strengthening international cooperation. The PNS also calls for the formulation of a national plan for investment in health, aimed at enhancing the health services network's response capacity and reducing regional inequalities.

States and municipalities prepare their respective health plans and submit them to the corresponding health councils.

Forums and mechanisms for policy coordination

Health policy implementation relies on forums and collegiate mechanisms through which negotiations between managers of the three government spheres aim to harmonize the different visions and address specific local-regional issues. At the national level, managers meet in the Tripartite Interagency Commissions (CITs), and at the state level, in the Bipartite Interagency Commissions (CIBs).

The health pact brings together a set of institutional reforms agreed upon by the three levels of management (federal, state, and municipal) and has the objective of promoting innovations in management processes and tools, aiming at reaching greater efficiency and quality of SUS responses. The health pact redefines the responsibilities of each manager as a function of the population's health needs and with a view to achieving social equity.

Municipalities, states, and the Union implement the health pact through adhering to the management commitment terms (TCG). The TCG replaces the certification processes of the various forms of management previously in effect and establishes goals and commitments for every entity of the federation, and is renewed annually. Included in the priorities defined in 2006 are reductions in child and maternal mortality, control of emerging and endemic diseases (such as dengue and Hansen's disease), and reduction in specific mortality from cervical cancer, among others.

The health pact also modified the way federal resources were transferred to states and municipalities, and are now integrated in five large financing blocks (Basic Care, Intermediate and High Levels of Care, health surveillance, pharmaceutical assistance, and SUS management), replacing the previously used mechanism of specific incentives, which fragmented the financing in more than one hundred itemized groupings.

The health pact includes the life pact, the management pact, and the SUS support pact. The life pact is the SUS managers' commitment based on priorities impacting the Brazilian population's health situation. The priorities include: 1) health of the elderly; 2) control of cervical and breast cancer; 3) reduction in child and maternal mortality; 4) strengthening response capacity to emerging and endemic diseases, especially dengue, Hansen's disease, tuberculosis, malaria, and influenza; 5) health promotion; and 6) strengthening basic care. The management pact establishes guidelines for system management in terms of decentralization; regionalization; financing; planning; the integrated programming by agreement (PPI); regulation; social participation and control; and work and health management. The SUS defense pact is based on the managers' commitment to: a) consolidate the Brazilian health sector reform, as explicitly

[6] Decree MS/GM Nº 2.607, 10 December 2004, approval of the National Health Plan/PNS – Health Pact for Brazil.

stated in the Federal Constitution; and b) develop and articulate activities, in the respective instance and jointly with other managers, aiming at articulating and establishing the SUS as public policy. Operational guidelines were agreed on at the Tripartite Interagency Commission meeting on 26 January 2006, approved at the national health council meeting on 09 February 2006, formalized by Decree/GM No. 399 of 22 February 2006, and regulated by Decree/GM No. 699 of 30 March 2006. Specific concerns will be subject to complementary regulations, also as a result of negotiation among managers.

Monitoring, Control, and Evaluation Mechanisms

The monitoring, evaluation, enforcement, and control activities of the health system are carried out by a set of internal and external bodies. Policy and program monitoring is done by the units responsible for formulating and coordinating policies and programs. The Health Care Secretariat develops control and evaluation mechanisms for basic and specialized services and maintains a national program to evaluate health services (PNASS). The Strategic and Participatory Management Secretariat is responsible for formulating and coordinating SUS policy on management monitoring and evaluating. The MS, through the Executive Secretariat, formulates policy on regular performance evaluation of the health system in the country involving the three government levels in the process.

The national auditing system, operating at the three levels of SUS management, is responsible for supervision, evaluation, and control of sectoral activities, with functions related to the government spheres to which they are linked. Supervision and control of health expenditures at the federal level is a function of both the MS's Secretariat of Internal Control (CISET), linked to the Federal Control Secretariat of the Ministry of Agriculture, and the Brazilian Court of Audit (TCU), in the Legislative Branch responsible for external control. In the state sphere, the state audit offices perform this role and, in the municipalities, the councils on municipal accounts.

The Ministry of Planning and Budget (MPO) monitors and evaluates the performance of programs that refer to PPA priorities. The Public Ministry, which includes among its functions to oversee the *"the effective respect for the public's guaranteed rights by the public powers and services of public relevance*,"[7] monitors, inspects, and investigates complaints related to the compatibility of the activities and services delivered with the Constitutional and legal provisions, as well as the legality of public health system expenditures.

The health councils and conferences provide, in each government sphere, opportunities for participating in the decision-making process and social control – the councils approve health plans, budgets, and policies, and systematically monitor activities and expenditures. And the conferences, in turn, establish policy guidelines in national-level forums that meet every four years (and with varying regularity at the state and municipal levels), with broad participation of all sectors.

Information Systems

The SUS relies on several information systems to help monitor the epidemiological situation and the services provided. The MS is the national coordinator of these systems. The information is made available to the managers and population through the Internet. The data are processed through programs that permit tabulations and protect the privacy of the information. The budget information systems (SIAFI and SIDOR, at the federal level) are linked to the MPO and the Ministry of Finance. The MPO also operates an information system on federal public employees.

[7] Health activities and services hold public relevance (Federal Constitution, Article #197).

Box 1: Main systems for health information and databases

Basic health care Information system (SIAB). The SIAB records the basic health care actions and services carried out by the Family Health Program (PSF). It uses three forms for data entry, one for family surveys and living conditions, another for health information, and the third for information on production and bench markers for evaluation.

Hospital information system (SIH-SUS). This system generates monthly data on SUS-provided hospital services. It includes, among other things, data on resources allocated to each hospital belonging to the SUS network, on hospitalizations, procedures, average length of patient stay in the hospital, by municipality and state. The information can be disaggregated by gender, age, place of care, and patient's address.

Outpatient information system (SAI). The SAI makes available information on SUS outpatient services. Data can be disaggregated by region, type of care, type of facility, and expenditures.

Mortality information system (SIM). The SIM records mortality data based on death certificates (DO), collected by the state health secretariats, with information on place and cause of death and characteristics of the deceased (gender, age, race, residence, etc).

Live births information system (SINASC). SINASC provides vital information on live births for epidemiological, statistical, and demographic analyses, with the most significant characteristics, such as gender, birthplace, type of delivery, prenatal care, and birth-weight of newborn, among other things. The system operates based on a standard document, the birth certificate (DN).

National immunization program information system (SIPNI). SIPNI contains records on dispensed immunobiologicals and the vaccinated population, by age group, in a given period of time, in a given geographical area. SIPNI is made up of two subsystems: the Immunization Program Evaluation Subsystem (API), which provides data on vaccination coverage (routine and campaigns), dropout rate, and control of of immunization bulletins, and can be used at the federal, state, regional, and municipal levels; and Immunobiologicals Supply and Distribution Subsystem (EDI), which controls the supply and distribution of immunobiologicals at the state and federal levels.

National disease notification system (SINAN). SINAN records and processes data on disease requiring mandatory notification from the entire country, providing analytical information on the morbidity profile. It is the main instrument for collecting data on diseases requiring a mandatory report and other diseases. Founded in 1996, SINAN provides municipalities and states with a basic technological infrastructure for data transfer.

Prenatal information system (SIS PRE-NATAL). SIS PRE-NATAL is a computerized system, developed and accessible through DATASUS, available to the municipalities that adhere to the program to humanize prenatal care and childbirth, and its use is mandatory in these municipalities. SUS managers can monitor the program by tracking each pregnant woman.

Public health budget information system (SIOPS). SIOPS collects, organizes, processes, and disseminates information on revenues and expenditures in health in the three government spheres. It monitors adherence to Constitutional Amendment No. 29/2000, which links resources to public health activities and services.

System of financial management and agreements (GESCON). GESCON is a computerized system that manages agreements signed by the Ministry of Health and the National Health Foundation (FUNASA) to make resources available for health activities financed through negotiated transfers.

The institutional systems have improved significantly and become more reliable in recent years, although state disparities still exist.

The Ministry of Health still coordinates the **national health information network (RNIS)**, a comprehensive online network to provide access to and exchange of health information for management, planning, and research for SUS managers, agents, and users, and to promote the training of health professional in information and informatics.

In joint actions with the PAHO/WHO Representative Office in Brazil, the Ministry of Health develops a strategy of interinstitutional coordination with the creation of an **interagency health information network (RIPSA)**. This network aims to make available adequate, timely and comprehensive basic data, indicators, and situation analyses on health conditions and their trends in the country, in order to improve formulation, coordination, management, and operation

of public policies and activities aimed at improving the quality of health and life of the population. RIPSA is made up of representative bodies in the national technical and scientific sectors involved in data production and analysis (producers of information in the strict sense, and managers in the health system, and science and technology units). Demographic information is the responsibility of the IBGE, linked to the MPO.

Besides SUS's own systems, information is also available from systems operated by other governmental bodies. The main ones include:

- **Federal financial administration system (SIAFI)**

This system is the country's main instrument for budgetary and financial administration. Managed by the Ministry of Finance, it is connected to all government agencies, state agencies, foundations, public companies, mixed-economy societies, and bodies of the legislative and judicial branches. Through SIAFI, information is obtained on budget execution and financial administration, which make up the record of accounts presented to the National Congress.

- **Surveys by the Brazilian Institute of Geography and Statistics (IBGE)**

Periodic IBGE surveys provide statistics on issues such as universal access to health services and family health costs, as well as on the network of health services throughout the country. The most important are:

  - **Medical and health care survey (AMS)**: Includes the existing public and private health services (characteristics of the facilities, equipment, human resources, production capacity).
  - **Health supplements of the national household sample survey (PNAD)**: household survey, by sampling, which is the main source of information on the population's access to health activities and services and on public and private system coverage. PNAD produces regular annual reports on living conditions, housing, and access to basic sanitation services, employment, and income. The health supplements are published every five years, although the periodicity has not yet been formally defined.
  - **Family budget survey (POF)**: household survey, published occasionally, which collects data on household expenditures. The survey is the main source of information on private health expenditure.

2.2.3. Sectoral Regulation

The SUS, under the coordination of the MS, develops regulatory policies to address the regulation, control, and oversight of the production of all goods and services in the health sector.

SUS Health Care

In terms of public health care, regulation is seen as a management function that involves intervening on the production of health actions, outpatient and inpatient care, in the different complexity levels (basic, intermediate, and high), and on users' access to these three levels of care. The strategy to regulate the supply and demand for health services is based on regulatory complexes, which consist of organizing actions related to the Regulation of Access to Care (hospital centers, physician's office and exam clinics, health care protocols) in order to adapt available health services to the real health needs.[8]

An example of regulatory action in the SUS is the MS' creation, after public consultation, of clinical protocols and therapeutic guidelines for illnesses requiring expensive prescription drugs/treatments. Standardized therapy protocols at the basic care level are available for several more common diseases and/or those with greater epidemiological significance. Programs for

[8] The Ministry of Health. Health Attention Secretariat. National Audit Department of the SUS. Work and Health Management Secretariat. *Curso Básico de Regulação, Controle, Avaliação e Auditoria da Atenção à Saúde do SUS: Noções básicas sobre os processos de apoio à gestão no âmbito da atenção à saúde*. ["Basic Course in Regulation, Oversight, Evaluation, and Auditing of SUS Care: Basic Notions on Support Processes for Health Care Management."] 1st. edition – Brasilia: Ministry of Health, 2005.350 p.: SAS *Cadernos* Series.

hypertension, diabetes, AIDS, and tuberculosis, for example, have well-established treatment procedures. At the hospital level, some units, especially at university hospitals, are implementing other protocols, but these are not yet disseminated in other SUS units.

Professional Practice

Legislation on the conditions for professional practice is generally an exclusive responsibility of the Union (Federal Constitution, Article 22, XVI). Oversight of the professional practice of different health careers is a function of the respective *professional councils*, autonomous public non-state bodies established by law to supervise ethical and legal aspects of professional practice in each career, throughout the national territory. Authorization to enter into professional practice requires presentation of a diploma after completion of the course at a university or technical school recognized by the educational system. Council membership should be renewed annually.

Health plans and insurance (prepaid private systems)

The care provided by private health plans and insurance has been subject to regulation, control, and oversight since 1998, by the Union, as established by specific legislation[9] that sets minimum criteria for the supply of services, restricts grounds for discontinuing care, and reduces variations in the amount of premiums charged according to age.

This legislation covers two major segments of "Supplementary Health," as it is called: I) operators of private health care plans: any private legal body, independent of the legal nature of their founding constitution, which offer such plans against pecuniary compensation, with care provided by their own services or by third parties; and II) private health care insurance operators: legal bodies founded and regulated in compliance with specific legislation for commercial activity in insurance and which guarantee coverage of health care risk, through the insured's free selection of the provider for the respective service and refund of expenses, exclusively.

Supervision and regulation of the private health insurance subsystem is a responsibility of the national supplementary health agency (ANS), created by Law No. 9.961 of 28 January 2000. The ANS monitors trends in private plan costs, providers, and inputs, authorizes corporate splits, mergers, acquisitions, transfer of shares, and articulates with consumer protection organizations.[10]

After state regulation began, significant changes occurred in the sector, impacting the dynamic of the industry of private health care plans and competitive strategies. A recent study, based on data from ANS national census on insurance operators, showed a reduction of 17% in the number of companies offering group plans from 2000 to 2003, and of 23% in the number of companies offering individual self-managed plans. In the same period, the number of registered insurance companies increased from 4 to 14 and the number of administrators from 28 to 37 (32%).

Health products and services of interest

The national health surveillance agency (ANVISA),[11] created in 1999, is a regulatory agency with administrative autonomy, stability of leaders during term in office, and financial autonomy. Linked to the MS through a management contract, it is led by a collegiate directorate, composed of five members. ANVISA's institutional purpose is to protect the populations' health through sanitary control of the production and marketing of products and services subject to health surveillance, including the environment, processes, inputs, and related technologies. It is also responsible for health regulation at ports, airports, and borders, and dialogue with the Ministry of Foreign Relations and foreign institutions to address international matters in health surveillance.

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[9] Federative Republic of Brazil. Law No. 9.656, 3 June 1998, and Provisional Measure No. 1.665, which sets the legal framework for private plan regulation.
[10] Ministry of Health. National Supplementary Health Agency (ANS). Information available at: www.ans.gov.br online.
[11] Law No. 9.782, on 26 January 1999.

Among its functions, the following are included: coordinate the national health surveillance system; establish standards; propose, monitor, and implement policies, guidelines, and activities in health surveillance; grant product registrations, according to the standards of their area of action; grant and cancel the certificates related to standards of good practice in manufacturing; interdict, as a measure of health surveillance, sites of manufacture, control, importation, storage, distribution, and sale of health products and delivery of health services, in case of violation of pertinent legislation or imminent risk to health; prohibit the manufacture, importation, storage, distribution, and marketing of products and inputs, in case of violation of pertinent legislation or imminent risk to health; monitor the evolution of costs of drugs, equipment, components, inputs, and health services; establish, coordinate, and monitor toxicological and pharmacological surveillance systems; promote the review and periodic updating of the pharmacopeia.

Responsible for the regulation, oversight, and control of products and services involving public health risk, ANVISA submits for sanitary control and oversight all drugs for human consumption, their active substances and other inputs, processes, and technologies. Drug registration and surveillance operate with the support of a technical chamber of drugs (CATEME), an advisory body composed of specialists without ties to the pharmaceutical industry, responsible for analyzing the registration processes of new drugs in the country and for supporting the formulation of guidelines for evaluating the processes.

Drug price regulation is the responsibility of the chamber of drug market regulation[12] (CMED), composed of representatives from the Ministries of Health, Justice, and Finance, and the office of Chief of Staff. The CMED establishes market regulation and criteria for defining and adjusting prices – including new generations of drugs. Decree No. 123, which created CMED, also established the annual readjustment of drug prices starting in 2004. Readjustments are limited to a ceiling, defined by three criteria: (i) national price index for the general consumer (IPCA), calculated by IBGE; (ii) a productivity factor, and (ii) an intra- and inter-sectoral relative price adjustment factor.

The processes of registering, monitoring, and labeling of food, as well as standards on identity and quality of products are established by federal laws that delegate specific responsibilities to the health and agriculture sectors. In the health sector, inspection activities are decentralized at the state and municipal levels, which participate in the technical analysis of product registration processes. The Ministry of Agriculture centralizes the registry and the industrial inspection of animal products, beverages, pesticides, and drugs for veterinary use. Agricultural products for export are under direct control of the federal government. The health and agriculture sectors have their own networks of laboratories to support food control measures.

Brazil's environmental policy is based on specific laws[13] and the Federal Constitution of 1998, which established the national environmental system, having as its advisory and deliberative entity the national council on the environment and, as executive organ, the Brazilian institute for the environment and renewable natural resources.[14]

2.2.4. Development of the Essential Public Health Functions (EPHFs)

In 2004, a discussion process on the Public Health in the Americas Initiative was initiated, focusing on Brazil's decentralized health system, which resulted in the adaptation of the instrument developed by PAHO to measure the performance of Essential Public Health Functions (EPHFs). The initiative promotes a common concept of public health and its essential functions in the Americas; establishes a plan for assessing EPHF performance applicable to all countries in the Americas; and evaluates public health practice in each country, based on established criteria. The EPHFs have been defined as the basic conditions that permit a better performance of public health practice. The PAHO instrument aims at establishing indicators and standards so that public health is strengthened through reinforcing the necessary capacities,

[12] CMED was created by Decree No. 123, 26 June 2003. Decree No. 4.766, 26 June 2003, regulates the establishment, responsibilities, and operations of the CMED.
[13] The Federative Republic of Brazil, Law No. 6.938, 1981.
[14] The Ministry of the Environment. Brazilian institute for the environment and renewable natural resources (IBAMA). See: www.ibama.gov.br for more information.

based on the supposition that *"if the functions are well defined and include all capacities required for good public health practice, sound operation will be guaranteed in each sphere of activity or area of public health work.*"

Box 2: List of EPHFs adapted to the Brazilian context

EPHF 1	Monitoring, evaluation, and analysis of the health situation
EPHF 2	Surveillance, research, and control of risks and injuries in health
EPHF 3	Health promotion
EPHF 4	Social participation in health
EPHF 5	Develop policies and institutional capacity of public health planning and management
EPHF 6	Capacity for regulation, oversight, and auditory control in health
EPHF 7	Promotion and guarantee of universal and equitable access to health services
EPHF 8	Administration, development, and training of human resources in health
EPHF 9	Promotion and guarantee of quality in health services
EPHF 10	Research and technological advances in health
EPHF 11	Coordination of regionalization and decentralization processes in health

The instrument was tailored to the SUS's principles, guidelines, legal and organizational structure, and, especially, the reality of SUS state management. To respond to diverse regional situations, parameters are established in each state, instead of using national parameters.

In the last two years, nine state health secretariats have already participated in the EPHF assessment workshops, which lasted three days. Early results show that among the 11 essential functions evaluated, EPHFs 7, 8, and 9 received the worst evaluations in most states, while EPHFs 5 and 11 obtained the top performance scores in six states.[15]

2.3. Financing, expenditure, and allocation of resources

The financing of the Brazilian health system is mixed, in which public and private sources of financing coexist. Public financing covers nearly 48% of the total health expenditure, originating in general taxes in the three government spheres and in social contributions (federal). The Union's portion in financing the SUS was a little more than 50% of the total for the public system in 2004; states contributed nearly 27%, and municipalities 23%. In 2006, the Ministry of Health's budget was R$44.3 billion *reais,* and in 2007 it was approximately R$46.8 billion *reais*. Nearly half of these resources are transferred to states and municipalities. The other half covers MS expenses with its related entities (INCA, GHC, Fiocruz) and the hospitals under its direct administration.

Private financing comes from companies and families. The companies' expenditure is used almost exclusively to finance, usually on a partial basis, insurance or health plans for employees and dependents (*fringe benefits*). The families' expenditure is concentrated in the highest income brackets: the richest 30% were responsible for 68% of family expenditure in health in 1996, while the poorest 30% were responsible for only 7% of family expenditure.[16]

As Brazil still does not have a national health accounts system, reliable data does not exist on the total health expenditure (public and private) with internationally comparable criteria. The World Health Organization (WHO) estimated, however, that Brazil's total spending in health in 2004 amounted to 7.7% of the GDP, that public spending equaled nearly 3.4% of the GDP, and that family expenditures accounted for about 64% of the private expenditure.[17]

When Brazil's statistics are compared to the public spending in other countries with universal access public health systems, it is evident that the government's contribution is insufficient for the country's health system: in the other countries, as a rule, public spending in health equals 7.3% of the GDP, ranging from a minimum of 5.5% to a maximum of 12.7%.

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[15] CONASS and WHO/PAHO. *A Gestão da Saúde nos Estados: Avaliação e Fortalecimento das Funções Essenciais. Brasília: CONASSS*, ("State Health Management: Evaluation and Strengthening of the Essential Functions.") Brasília: CONASS 2007.
[16] IBGE, Family budget survey 1995/1996.
[17] WHO website: http://www.who.int/nha/country/BRA-S.pdf.

Table 6: Federal health expenditure by subsector/function, Brazil, 2005/2006

Program	R$ Dec. 2006	
	2005	**2006**
Hospital and outpatient care	7.19	6.54
Basic health care	51.61	70.91
Environmental, epidemiological, and health surveillance	60.06	45.03
Surveillance, prevention, and control of diseases	3.84	3.26
Specialized health care	9.73	6.32
Other programs	7.54	3.62
MS budget	44.86	46.21

Source: DISOC/IPEA–SIAFI/SIDOR

The health pact[18] introduced significant changes in the way resources were transferred to states and municipalities, grouping the resources into five blocks of financing: a) basic care package; b) intermediate and specialized outpatient and inpatient care package; c) health surveillance package; d) pharmaceutical assistance package; and e) management package. The new rules are regulated by Decree GM/MS No. 204, 29 January 2007.

The financing packages are made up of components, in accordance with the specifics of their predetermined health activities and services. The federal resources that make up each package are transferred to the states, Federal District, and municipalities, fund by fund, in singular and specific accounts, to finance activities in that package, following specific normative acts. Resources for the pharmaceutical assistance package, however, follow slightly different rules, and must be transferred to specific accounts for each component and earmarked exclusively for activities in that respective component. The same applies to federal resources from international loan agreements.

Basic Health Care Package[19]

The Basic Health Care Package (Piso de Atenção Básica - PAB) has two components: I) fixed basic care package (Fixed PAB); and II) variable basic care package (Variable PAB).

The Fixed PAB refers to the financing for basic health care, which is automatically transferred monthly, in a regular and automatic manner, from the FNS to health funds of the Federal District and the municipalities. The resources from the incentive to decentralize the health units of FUNASA, incorporated in the fixed PAB component, can be applied in the financing of these units.

Variable PAB resources are transferred from the FNS to the health funds of the Federal District and the municipalities, through adherence to and implementation of health actions, which must include those from the respective health plans. These transfers are earmarked for the financing of strategic areas in basic health care. These include: I) Family health; II) community health workers; III) oral health; IV) compensation for regional specifics (5% of the minimum fixed PAB value); V) incentive factor for basic care for indigenous peoples; VI) incentive for health care in the penitentiary system; VII) incentive for comprehensive health services for adolescents in conflict with the law, in internment and provisional internment; and VIII) other considerations that may be instituted through specific normative act.

[18] Decree MS/GM 399, February 2006.
[19] The financing of the basic care block is regulated by Decrees GM/MS No. 648, 28 March 2006; No. 649, 28 March 2006; No. 650, 28 March 2006; No. 822, 17 April 2006; No. 847, 2 June 2005, and Inter-Ministerial Decree No. 1.777, 9 September 2003.

Intermediate and specialized outpatient and inpatient care package

This package has two components: I) intermediate and specialized outpatient and inpatient financial limit component (MAC); and II) fund for strategic actions and compensation component (FAEC).

The MAC component in the states, Federal District, and municipalities finances intermediate and specialized health activities and comes from incentives transferred monthly. It incorporates the resources allocated to: I) specialized dental center (CEO); II) Mobile emergency care service (Samu); III) Workers health referral center; IV) Adherence to the contracting of teaching hospitals, small hospitals, and charitable hospitals; V) Incentive factor for development of university teaching and research in health (Fideps); VII) incentive program for care for indigenous people (Iapi); VII) Incentive for Integration of the SUS (Integrasus).

The FAEC component is composed of resources aimed at financing the following items: I) procedures regulated by the national center for regulation of high complexity care (CNRAC); II) transplants and related procedures; III) strategic or urgent actions, which are temporary and implemented with predetermined schedules (for example, the intermediate complexity elective surgery project); and IV) new procedures, not related to those already established and in effect or that do not have parameters that can define financial limits over a period of six months, in order to formulate the documented track record needed for inclusion in the MAC.

Health surveillance package

The resources that make up the health surveillance financing package in the municipalities, the Federal District, and the states represent the grouping of epidemiological and environmental surveillance in health and health surveillance activities.[20] The health surveillance financing package has two components, and resources from one component can be used for activities in the other component, as long as they are included in the predetermined comprehensive programming and guided by the respective health plan: I) epidemiological and environmental surveillance in health component; and II) health surveillance component.

The epidemiological and environmental surveillance in health component refers to the federal resources allocated to activities of surveillance, disease prevention and control, composed by the current financial ceiling in health surveillance (TFVS) and also by the following incentives: I) subsystem of epidemiological surveillance in hospitals; II) public health labs; III) health promotion activities; IV) population-based cancer registry; V) death verification service; VI) Vaccination campaigns; VII) Monitoring resistance of the *Aedes aegypti* to insecticides; VIII) contracting field agents; IX) STDs/AIDS. The health surveillance resources for funding lab support activities are incorporated into the package.

The epidemiological and environmental surveillance in health component also include federal resources from international agreements: I) to strengthen health surveillance management in states, Federal District, and municipalities (Vigisus II); and II) for the STD/AIDS Program.

The health surveillance component refers to federal resources allocated to health surveillance activities, known as the financial ceiling for health surveillance (TFVISA).

Pharmaceutical Assistance

The pharmaceutical assistance financing package has three components: I) basic pharmaceutical assistance component; II) Strategic pharmaceutical assistance component; and III) high cost/high complexity drug prescription component (CMDE).

The basic pharmaceutical assistance component covers the procurement of drugs and pharmaceutical inputs for basic care and those for specific diseases and health programs. It includes a fixed financing portion and a variable financing portion. The fixed financing portion consists of a per capita value for procurement of basic care drugs and pharmaceutical inputs,

[20] The financial terms of the health surveillance block are defined in Portaria GM/MS No. 2.473, 29 December 2003; Decree GM/MS No. 1.172, 15 June 2004; Decree GM/MS No. 2.529, 23 November 2004; Decree GM/MS No. 2.607, 28 December 2005; Portaria 2.608, 28 December 2005: and Decree GM/MS No. 2.606, 28 December 2005.

transferred to the states, Federal District, and/or municipalities, according to Bipartite Interagency Commission pacts. The state and municipal managers should complement the financing of the fixed portion of the basic component with corresponding financial resources, drugs, or inputs, based on agreements made during the Bipartite Interagency Commission and on legal provisions of the existing pharmaceutical assistance policy.

The variable financing part of the basic pharmaceutical assistance component consists of per capita amounts for the procurement of pharmaceutical drugs and inputs for the programs for hypertension and diabetes, asthma and rhinitis, mental health, women's health, food and nutrition, and smoking cessation. These resources must be decentralized for states, Federal District, or municipalities, in accordance with Bipartite Interagency Commission pacts. Part of the resources for the variable portion of the basic pharmaceutical assistance component can be executed centrally by the Ministry of Health (such as in the case of human insulin) or decentralized to the states, Federal District, and municipalities, in accordance with Tripartite Interagency Commission pacts.

The strategic pharmaceutical assistance component finances pharmaceutical assistance for the following strategic health programs: I) control of endemic diseases, such as tuberculosis, Hansen's disease, malaria, leishmaniasis, Chagas, and other endemic diseases of national or regional relevance; II) antiretrovirals for the STD/AIDS Program; III) blood and blood products; and IV) immunobiologicals.

The CMDE finances procurement and distribution of the group of drugs for chronic pathologies and/or long-term or high-cost treatments, according to criteria established by a specific decree. The CMDE financing for drug procurement is the responsibility of the Ministry of Health and the states, according to CIT pacts.

SUS Management

The financing package for SUS management supports implementation of activities and services that contribute to the system's organization and efficiency. It is made up of two components: I) component for the qualification of SUS management; and II) component for implementing health activities and services.

Monitoring and control of financial resources

The application of resources transferred from the FNS to the state, Federal District, and municipal health funds is reviewed by the Ministry of Health through the Management Report,[21] prepared annually and approved by the respective health councils. This document is analyzed by the MS monitoring, regulatory, control, and evaluating bodies, to identifying trends that can help update health policies, gather data for decision-making, and indicate the need for auditing and oversight by the federal component of SNA.

The control and monitoring of actions and services financed by the financing packages takes place through the use of specific instruments adopted by the Ministry of Health, with the subnational entities holding responsibility for providing regular and systematic data. It is prohibited to use resources from the basic care package, intermediate and high complexity outpatient and inpatient care package, health surveillance package, pharmaceutical assistance package, or SUS management package for payment of: I) inactive public employees; II) active public employees, except those under contract to perform functions related to services in the respective package; III) bonus payments for commissioned posts, except those directly linked to the functions in the respective package; IV) payment of consultancies/advisory services provided by public officials belonging to the staff of that municipality or state; and V) infrastructure projects, except for reforms and adjustments. Noncompliance with the rules for use of transferred resources, as well as the agreed upon commitments, could lead to suspension of transfers.

In February 2006, the MS instituted guidelines for contracting services within the scope of the SUS. Through this mechanism, the manager can complement the supply of services by contracting private health services only when all installed public health capacity is being used,

[21] Decree GM/MS No. 3.332, 28 December 2006.

and, whenever the need is proven and justified by the operating plan of the respective network. In the case of charitable and nonprofit organizations, the mechanism used is an agreement, which confers to such entities the status of public sector partners. Conversely, these organizations should make available to the SUS at least 60% of their respective capacity, including medical-hospital equipment. Use of these equipment to serve private users, including those from agreements with private entities, will be permitted only after their use has been exhausted by SUS patients.

2.4. Delivery of Services

2.4.1. Health service supply and demand

Access to health services is ensured for the majority of Brazil's population. Data from household surveys[22] indicate that 98% of people who reported seeking some type of health service in the reference period said they received care when they sought it. This percentage is slightly lower for the population earning minimum wage salary or less (97%) and slightly higher in the income bracket above 20 minimum wages (99.5%).

Brazil's public health service network has a strong presence of private facilities that provide hospital, and diagnostic and therapeutic services, and, at the same time, a notable presence of public facilities that provide public health activities and services and outpatient care.

According to the 2005 health and medical care survey (AMS)[23] conducted by IBGE, there were 77,004 health facilities in the country, 70.4% of which were public. In 1976, 18.1% of facilities with inpatient capacity were public (81.9% of the hospital facilities in the country were private); in 2005, 38.1% of hospital facilities (2,727) were public and 74.6% of non-inpatient health facilities were public. The public system as a whole has 59,177 health facilities; of these, 47,110 (79.6%) provided outpatient care.

Table 7: Number of health facilities by region, Brazil, 1985-2005

Region	Health facilities				
	1985	1992	1999	2002	2005
Entire country	28,972	49,676	56,133	65,343	77,004
North	1,722	3,513	4,645	5,137	5,528
Northeast	9,174	13,106	16,265	18,912	22,834
Southeast	10,977	19,717	21,483	24,412	28,371
South	5,221	10,012	9,819	11,757	13,113
Center-West	1,878	3,328	3,921	5,125	7,158

Source: IBGE, Directorate of Surveys, Department of Population and Social Indicators.
Medical and Health Care Survey, 1999, 2002, and 2005.

Of the private outpatient facilities, only 24% provided services for the SUS, of which 64% offered specialized services; also, 96% of outpatient facilities with hemodialysis equipment were private.

The municipal network ensures basic care and some intermediate care. This network is made up of small health units (health clinics and posts). According to the AMS, 60.6% of outpatient facilities are public and 59.4% offer basic care only. The installed capacity in terms of equipment is limited: 11.6% and 7.7% of the outpatient facilities have simple sonogram and X-ray equipment, respectively.

[22] IBGE. PNAD 2003, Health Supplement.
[23] IBGE, AMS 2005.

The country had 443,210 hospital beds in health facilities in 2005. Of these, only 34% belonged to public institutions; 294,244 were private. However, besides the public beds, the SUS makes available the population 82% of the total private beds. That is, close to 88% of the beds in the country are certified for use by the universal public system. SUS hospital care recorded nearly 13 million hospitalizations in 2005, with an average stay of 5.9 days.[24]

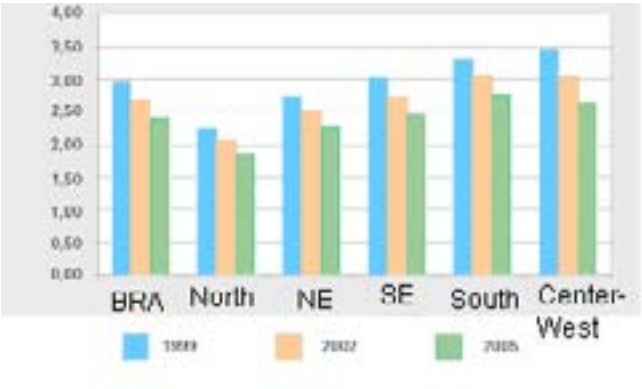
Table 8: Public and private hospital beds in health facilities, Brazil, 1976-2005

Year	Total	Entity			
		Public	%	Private	%
1976	443,888	119,062	27	324,826	73
1986	512,346	114,548	22	397,798	78
1992	544,357	135,080	25	409,277	75
2002	471,171	146,319	31	324,852	69
2005	443,210	148,966	34	294,244	66

Source: IBGE, Directorate of Surveys, Department of Population and Social Indicators
Medical and Health Care Surveys,1999, 2002, and 2005

Although geographic distribution of the number of beds in the country has improved between 1999 and 2005, significant differences exist among the regions in terms of size and technological capacity of the hospitals. In the North and Northeast, most facilities have less than 50 beds, are poorly equipped, and have a less diversified clinical body, while the Southeast and South regions have a higher concentration of larger and more sophisticated facilities, with more intensive care centers.

Graph 3: Number of beds per 1,000 population in health facilities, by region, Brazil, 1999-2005



Source: IBGE, Directorate of Research, Population and Social Indicators,
Medical-Health Care Research 1999/2005

Recent data[25] for the entire population indicate that the number of per capita medical consultations per year was 2.4 in 2003; in rural areas, the rate was 1.8. Greater difficulties in access are found in the North, due to lack of available services and the widely dispersed population. The same survey identified oral health care as the main critical concern: 22% of the 5-19-year-old population has never had access to dental treatment. In the public system, 63% of outpatient procedures refer to basic care. In the North, this percentage is 72%.

SUS outpatient care is classified as: *basic care*, which includes measures of health promotion and disease prevention, in addition to care in basic specializations and disease

[24] MS/DATASUS.
[25] IBGE, PNAD Health 2003.

control; *specialized care (intermediate complexity)*, involving specialists; and *high complexity care*, which includes complex equipment or technology.

The strengthening of basic care has been fomented, from the mid-1990s, as a strategy to reduce inequality in access and promote restructuring of the health care model, previously overly centered on hospital care. The most important mechanisms used to expand coverage and reduce inter-regional inequalities was the PAB (a per capita resource transfer mechanism), and the Family Health Program (PSF).

The PSF offers health care to a given population in a given geographical area, through assignment of this population to a multidisciplinary team, composed of at least one doctor, one nurse, nursing auxiliaries, and community health workers (in the ratio of one agent for a maximum of 150 families or 750 people). Each family health team is responsible for monitoring nearly 1,000 families. Formal training of professionals is carried out by capacity building and educational centers in all regions of the country, and emphasizes the promotion of intersectoral activities.

By 2005, the program, created in 1993, was already being implemented in 4,986 municipalities, with 24,600 teams offering coverage to 44% of the country's population (78 million people). In 3,995 municipalities, 13,133 oral health teams were operating ("Smiling Brazil" program), providing coverage to 35% of the country's population. The strategy also mobilizes 208,000 community health workers in 5,200 municipalities. In 2005, the MS provided R$2.7 billion *reais* for the family health strategy designed to finance up to 60% of the cost of the teams and to support the team training programs. The program has specific mechanisms for the poorest areas and the most scattered populations, especially rural areas in the Amazon region, municipalities with less than 30,000 inhabitants, and regions with an HDI equal to or less than 0.7. For these areas, there is an increase of 50% in the PSF incentive values and for the oral health teams**.**

The national transplants system (SNT) is present in 22 states of the federation, with 540 health facilities and 1,338 medical teams authorized by the SNT to perform transplants. The public network is responsible for most procedures of this kind performed in the country. Besides the state centers, eight regional centers exist, located in the states of Parana and Minas Gerais. In the state of São Paulo, the task of locating organ donors was delegated to 10 public teaching hospitals, called organ procurement organizations (OPO). In 2005, the SUS paid for 11,000 organ and tissue transplants. The cost of the procedures carried out through the SNT was more than R$450 million *reais*, or 1.3% of the total MS expenditure on health activities and services.

Since 2003, the mobile emergency care service (SAMU/192) has been the main component of the SUS's national policy on emergency care. The Ministry of Health has already certified 114 services of this type, which are now operating in 926 municipalities, covering, in all the regions, 92.7 million people. The service operates 24 hours per day, with teams that include doctors, nurses, nurse auxiliaries, and rescue team workers who provide urgent care and respond to traumatic, clinical, pediatric, surgical, ob-gyn, and mental health emergencies. The system absorbs an estimated 25,000 health professionals. Adapting to specific regional needs, in the North region SAMU provides, in addition to conventional ambulances, boats ("ambulanchas"), which have, besides the standard equipment, oxymeters and defibrillators used in cardiac emergencies, as well as aspirators, respirators, and incubators for newborns, in order to offer care services to the river populations.

Basic sanitation actions are the responsibility of the municipal governments, but, in most localities, the services are provided by state sanitation companies. The federal government has a key function in financing the system, contributing resources from the regular budget and from credit lines from contributions for the Fund for Guaranteed Time of Service (FGTS), on the part of employers and workers. The health system also carries out basic health activities in rural areas and small localities, most often associated with vector control, to combat endemic diseases. Funasa is responsible for health works in localities of up to 30,000 inhabitants, in rural and indigenous areas, and in outskirts of large cities with critical quality-of-life indexes.

Disease prevention and control activities relevant to public health follow norms established by specialized technical structures of the MS, under the form of plans and programs implemented in the municipal and state SUS jurisdictions. Federal responsibilities include coordinating the management of the national epidemiological surveillance system; the national environmental health surveillance system, including the workplace; the national public health

laboratory system, in the aspects related to epidemiological and environmental health surveillance; the epidemiological information system, and the national immunization system.

The MS is also responsible for data processing and dissemination and the health situation analysis that makes it possible to establish priorities, monitor the country's health staff, and evaluate the impact of disease prevention and control activities, in addition to providing input for MS policy formulation. It promotes policy formulation on health surveillance and is responsible for regulating and monitoring the management contract with the national health surveillance agency. The health surveillance secretariat of the MS still coordinates the process of preparing and monitoring the Integrated Programming on Epidemiology and Disease Control (PPI-ECD) and supervises the execution of technical activities developed by the Evandro Chagas Institute, the National Primate Center, the Professor Helium Fraga Reference Center, and the Strategic Input Storage and Distribution Center.[26]

2.4.2. Development of the health workforce

Both public and private institutions are responsible for training professional personnel in the health sector. As a result of policies on improving higher education adopted in the country throughout the 1990s that promoted expansion of the private network, there has been growing participation of private institutions, either for-profit or charitable, in the formal preparation of health professionals. By the end of the decade, in 1999, of the 97 courses in medicine, 54% were in the public sector, as well as 38% of the 130 courses in dentistry, and nearly half of the 153 courses in nursing and obstetrics. According to statistics from the National Institute of Educational Studies and Research Anísio Teixeira (INEP/MEC), between 1991 and 2006, 78 new courses in medicine were created (an increase of 98%), 451 new courses in nursing (increase of 425%), and 102 new courses in dentistry (increase of 123%). The 2006 census on higher education showed a total of 557 courses in nursing, 158 courses in medicine, and 185 courses in dentistry in the country.

In the area of public health (post-graduate level), also known as collective health, human resources training and education and scientific and technological output correspond, predominantly, to public institutions. The MS maintains the National School of Public Health Sergio Arouca (ENSP), one of the technical and scientific units of the Oswaldo Cruz Foundation (Fiocruz), which provide technical cooperation to all states and municipalities. It offers postdoctoral, doctoral and master's degrees in public health, in eight areas of concentration: health systems and services planning and management; epidemiology; endemic diseases; environment and society; health and society; environmental health; occupational health; occupational/environmental toxicology; and public policies and health. In addition to the ENSP, other schools include the School of Public Health (University of São Paulo–USP), the State University of Rio de Janeiro (course in social medicine), and some public health schools under the state health secretariats. All provide technical cooperation with states and municipalities.

The MS, through the Work and Health Management Secretariat (SGTES),[27] is working closely with MEC, establishing technical cooperation for the training and development of health professionals, at the graduate and post-graduate level. Several joint strategies have been developed, aiming at integrating education/work in health, including: (1) incentive and support for changes in the graduate health courses and implementation of the national curriculum guidelines, such as the national program for restructuring professional training in health (Pro-Saude); (2) incentives and strengthening of technical professional education activities in health; (3) strengthening of postgraduate programs, especially specializations in family health and multidisciplinary residences in health and in family and community medicine; and (4) Telehealth, which seeks, through the use of modern information and communication technologies, certification of family health teams, improving SUS basic care services.

However, serious problems persist in the geographic distribution of professionals (see Section 2.3.4), who are concentrated in major urban centers, as well as inequalities in salaries and work contracts, in addition to work processes inadequate to the goals of the system. To address these issues, the MS coordinates the preparation of proposals to improve working conditions in health and of a SUS career plan with a defined path.

[26] Decree No. 5.678, 18 January 2006.
[27] See www.saude.gov.br/sgtes for more information on SGTES.

2.4.3. Management of human resources and employment conditions

Human resource management, a priority for the public health system, is a major challenge. Most professionals working in public health institutions are selected through public exams and subjected to the public administration's general personnel regimen, defined in the three spheres of state management. Some professional categories have national rules (four-hour work day and possibility of accumulation of more than one employment position).

In 2006, the CIT approved the SUS national guidelines for the institution of SUS career plans, posts, and wages (PCCS/SUS). The PCCS/SUS guidelines incorporate a set of changes historically called for in the area of the SUS: the universality of career plans; equivalence of employment positions and posts; public competition through exams or tests and titles as the only hiring mechanism, except for public selection of health agents and endemic agents; mobility, understood as the guarantee of advancement of the SUS worker through the various spheres of government; flexibility; continuing education; performance assessment; a solidarity commitment, since the career plan is a agreement between managers and workers in support of service quality, professionalism, and adjustment of the professional's technical credentials to the health service needs. In 2006, 12 state health secretariats already had their respective PCCS/SUS.

The MS, with support from PAHO, maintains the Human Resources Observatory, along with universities and study centers, to monitor and improve knowledge of the health-sector job market, entry conditions for professionals, and mechanisms for continuing education that the country has been implementing. The Work and Health Management Secretariat also implements programs on work stability, work regulation, and certification and structuring.

Standards of pay also vary widely in the public system, associated with the different fiscal capacity of the federated units. In many states and municipalities, various forms of outsourcing have been instituted for different professional categories, in some cases as a means to make contracts viable that would otherwise be unfeasible in light of the regulations limiting public spending on personnel.[28]

In the private sector, there are several different forms of professional employment conditions, which also vary according to professional category. These range from permanent formal employment to short-term contracting of services, the system of "physician on duty" or even, what seem more common, partnerships between professionals and hospitals in which the doctor acts as self-employed without formal employment.

2.4.4. Human resource supply and distribution

Public and private health care facilities together were responsible for providing 1.6 million jobs in 2005, including technical, auxiliary and professional level personnel.

Table 9: Personnel employed in health facilities, Brazil, 2005

Region	Technical/auxiliary personnel		Professional personnel		Total
	Number	%	Number	%	
Brazil	751,730	46	870,361	54	1,622,091
North	48,076	55	39,147	45	87,223
Northeast	169,275	48	184,275	52	353,550
Southeast	366,650	45	447,312	55	813,962
South	112,395	45	136,274	55	248,669
Center-West	55,334	47	63,353	53	118,687

Source: IBGE – AMS 2005

[28] The law of fiscal responsibility sets maximum limits on public budget levels for personnel payrolls.

In 2005, Brazil had 870,361 job posts held by high-level professionals in health facilities,[29] nearly 20% more than that observed in the previous survey (2002). Of these, 61% were doctors, 13% were nurses, and 8.2% were dentists. All other high-level professionals held only 18% of the jobs.

Approximately 51% of the higher-level jobs are in inpatient facilities (hospitals). In the case of doctor and nurse positions, these percentages were even higher, reaching 56.6% and 57.2%, respectively. The same occurs with technical and auxiliary positions: hospitals employ 65.8% of the professionals. Auxiliaries and nursing technicians account for 70.7% and 73.3%, respectively, in this category.

The public sector is responsible for 50.7% of the higher-level jobs and for 54.1% of the technical/auxiliary level positions. Close to 35% of the higher-level professionals provided services in municipal public health facilities.

The number of doctor positions increased in all regions of the country in recent years. In total, the country's health facilities generated 307,952 doctor positions in 1992; rising to 423,812 positions in 1999; 466,273 in 2002; and reaching 527,625 in 2005.

Table 10: Professional personnel employed in health facilities, by region, Brazil, 2005

Regions	Total Number of Facilities	Population	Professional Personnel in Health Facilities			
			Total	Doctors	Nurses	Nurse : Doctor
Brazil	77,004	181,341,499	870,361	527,625	116,126	0.22
North	5,528	14,342,710	39,147	21,412	6,840	0.32
Northeast	22,834	50,376,463	184,275	105,279	31,488	0.30
Southeast	28,371	77,271,770	447,312	282,771	54,022	0.19
South	13,113	26,603,929	136,274	81,022	16,790	0.21
Center-West	7,158	12,746,627	63,353	37,141	6,986	0.19

Source: IBGE, WHA 2005.

The number of technical/auxiliary personnel employed in health facilities totals 751,730, 86% of which completed intermediate-level schooling. The regional distribution reveals the inequality in the service network: the South and Southeast comprise, together, 57% of the population, 64% of the intermediate-level personnel, and 67% of the professional personnel (69% of the doctors).

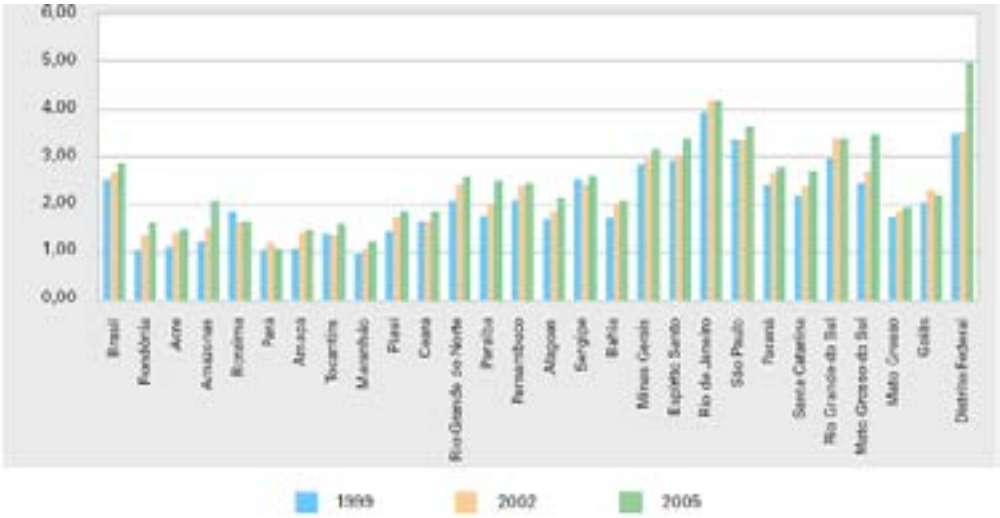
Table 11: Technical/auxiliary personnel employed at health facilities, by region, Brazil, 2005

Region	Total	Basic Level (Primary Education)	Intermediate Level (Secondary Education)	
		Number	Number	%
Brazil	751,730	104,177	647,553	86.14
North	48,076	5,481	42,595	88.6
Northeast	169,275	14,487	154,788	91.44
Southeast	366,650	66,101	300,549	81.97
South	112,395	13,933	98,462	87.6
Center-West	55,334	4,175	51,159	92.45

[29] IBGE, AMS 2005.

South and Southeast states and the Federal District had the largest rate of doctors per 1,000 population (between 3.5 and 4.9). The lower rates (less than 2 doctors per 1,000 population) are in the North and in some Northeast states. Besides the inequalities in the overall quantitative distribution, high concentration of some medical specialties (cardiology, neurology, urology, orthopedics) has been observed in the South and Southeast and in some other state capitals, impacting the health system's capacity to provide some degree of equitable care in these specialties in the states.

Graph 4: Doctors per 1,000 population, by state, Brazil, 1999, 2002, 2005.



Source: Survey Directory, Population and Social Indicators, Medical-Health Care Survey 1999/2005.

2.4.5. Governance and Conflict in the Health Sector

The MS coordinates a set of mechanisms at the national level to increase the capacity for conflict management and expand governance in labor relations in the scope of the SUS. These instruments are designed to address problems of job security, labor negotiation, and work regulation.

In this field, the principal mechanism is the SUS Permanent National Negotiation Roundtable (MNNP-SUS), which was reinstated in 2003 after six years of inactivity. The roundtable is a space for continuous negotiation, linked to National Health Council, involving the federal, state, and municipal managers, SUS private-sector entities, and SUS workers' associations. It is a forum for dialogue, discussion, and negotiated settlements between managers and workers, on issues relevant to the quality and effectiveness of health services available to the population and to promote better conditions both for SUS health workers and users.

The roundtable recognizes the need for establishing democratic working relations and for searching for alternatives to impasses and conflicts through joint participation of all actors involved. Its key objective is to settle conflicts resulting from labor relations. The link to the National Health Council allows solutions to impasses in negotiations, since in the case of entrenched positions, the issue can be submitted to arbitration of the collegiate plenary.

Relevant roundtable issues include the plan for job posts and wages in SUS careers, workday, education and professional certification, health care for health workers, social security, replacement of the SUS workforce, contracting modality and entry into the public sector, basic operating norms for human resources in health (NOB), and establishment of permanent state and municipal negotiation roundtables.

2.4.6. Drugs and other health products

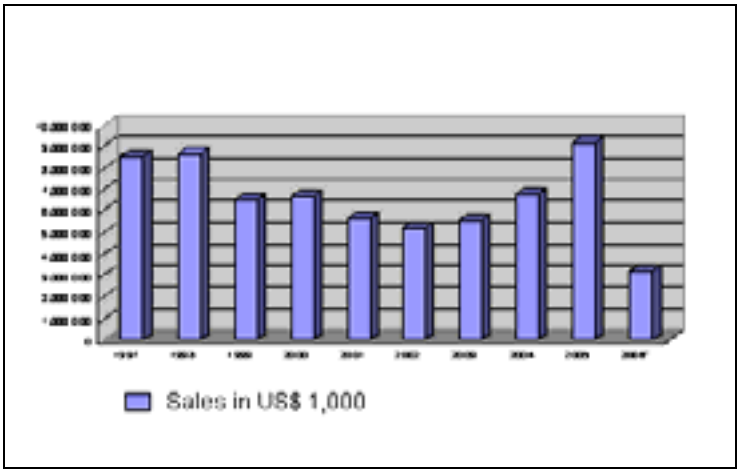
Brazil has one of the world's largest consumer drug markets. After a period of retraction in earnings (in US$) between 1999 and 2002, the national pharmaceutical market restarted its growth trajectory in 2003, reaching earnings (without taxes) of US$ 9 billion in 2005, 35% higher than in the previous year. Approximately 1.6 billion units were marketed in 2005.

The market, however, is highly dependent on imported drugs. According to a study conducted by the Brazilian government,[30] importation of the 1,028 most important drugs on the Brazilian market practically doubled between 1990 and 2000, rising from US$535 million to US$1.095 billion.

The increase in imports cannot be explained simply by the renewal of the therapeutic arsenal, with the launching in the national market of state-of-the-art drugs. Of the drug imports in 1998, 83% had original patents before 1977, and 47% before 1962. The importation of finished drugs grew from US$212 million in 1990 to US$1.28 billion in 2000.

The sale value (before taxes) in the domestic market was US$ 6.7 billion in 2004.[31] Domestic production of synthetic intermediaries and active ingredients is a priority in the country's industrial policy and has a specific line of financing available through the National Economic and Social Development Bank, PROFARMA.

Graph 5: Drug Market in Brazil, Sales in US$ 1000, 1997 to 2006



Source: GRUPEMEF
*Up to April 2006
Prepared by Febrafarma Dept.

ANVISA is the body responsible for drug registration in the country. In 2005, 10,762 products were registered, which totaled 43,781 presentations. Generic products accounted for 15% of these products and 19% of the registered presentations. The marketing of generic products, which began in 1999,[32] brought the average price down by 40% compared to the reference price.

[30] Brazil; Industrial, technological and international trade policy guidelines, 2003.
[31] Febrafarma, Department of Economy, 2006, http://www.febrafarma.com.br.
[32] Federative Republic of Brazil. Law No. 9.787, in 1999.

Table 12: ANVISA-registered drugs, by category, Brazil, 2005

Category	Products	%	Presentations	%
New	515	4.79	2,609	5.96
Generic	1,676	15.57	8,530	19.48
Similar	7,838	72.83	29,898	68.29
Biological	117	1.09	514	1.17
Phytotherapeutic and Homeopathic	616	5.72	2,230	5.09
Total	**10,762**	100	**43,781**	100

Source: ANVISA

Drug purchases represent 3.09% of the budget of families with income up to R$400.00 and is the most costly item among health expenses. For lower-income families, it accounts for 76% of this expense.

The federal government has been steadily increasing the amount of resources to help dispense drugs to the population through the SUS. The three government levels share the responsibility for financing basic pharmaceutical care. Procurement and distribution of drugs correspond to the states and municipalities, and the federal government in turn makes strategic products available (antiretrovirals, blood derivatives, and special antimicrobial drugs) as well as high-cost drugs, the latter in joint participation with the states.

The federal expenditure on drugs reached R$4.5 billion in 2005. Strategic and high-cost drugs, whose use is regulated by specific protocols, accounted for 66.4% of the federal expenditure on drugs in 2005.

In 2004, the Popular Pharmacy Program (*Farmácia Popular*) was created. One goal of the program is to benefit people receiving care in the private system who have difficulty in obtaining treatment due to high drug costs. Through this initiative, the federal government subsidizes up to 90% of the procurement of a roster of 12 permanent-use drugs used in the treatment of hypertension and diabetes, sold in specific SUS units and in certified private pharmacies. FIOCRUZ, executor of the program, acquires the drugs from public pharmaceutical labs and when necessary, from the private sector, and places them in the points of sale at low cost. Brazilian legislation requires the presence of a responsible pharmacist in pharmacies and drugstores.

Table 13: Main drug expenses of the Ministry of Health, Brazil, 2002-2005
(R$ thousands current value)

Programs	2002	%	2003	2004	2005	%
Medicines for strategic health programs, including STD/AIDS drugs and immunobiologicals	997,179.40	40.95	1,379,077.50	1,538,130.00	1,792,320.00	40.02
Financial incentive for municipalities with variable PAB for basic pharmaceutical assistance.	166,399.40	6.83	173,920.90	192,971.90	281,000.00	6.27
Medicines for special dispensation (high cost) through resource transfers to states	437,373.82	17.96	600,138.57	906,130.94	1,182,442.60	26.40
Care for coagulopathy* patients	273,140.60	11.22	112,445.10	208,000.00	223,000.00	4.98

Medicines covered by hospital care (AIH + Oncologists)	560,896.20	23.03	703,523.00	882,000.00	1,000,000.00	22.33
Total	**2,434,989.40**	**100.00**	**2,969,105.07**	**3,727,232.84**	**4,478,762.60**	**100.00**

Source: DAF/SCTIE/MS

* Note: There was a reduction in value with FACTOR VIII compared to variation in the prices obtained: in 2002, US$ 0.41; in 2003, US$ 0.12 to 0.23; en 2004, US$ 0.15

Immunobiologicals

Most of the vaccines and sera used in official programs – in particular in vaccines against tuberculosis, measles, diphtheria, tetanus, whooping cough, yellow fever, human and canine rabies, and also heterologous sera (antivenom, tetanus, antidiphtheritic and rabies) – are ensured by the national immunobiological production industry, made up of public labs. The strengthening of these public labs has been a priority in recent years. The federal government invested nearly R$200 million in these labs between 2002 and 2005.[33]

The Institute of Technology in Immunobiologicals–Bio-Manguinhos, a unit of FIOCRUZ, is the major public supplier of vaccines to the Ministry of Health. In 2006, its share of the national market reached 44% among national producers. More than 87 million doses of vaccines were produced that year for yellow fever, poliomyelitis, triple viral vaccine, monovalent HIB *(Haemophilus influenzae*), and DPT+Hib, the latter jointly with the Butantan Institute. The two most widely produced vaccines are against poliomyelitis (36.6%) and yellow fever (26.8%).

The country also implements the national vaccine competitiveness program (Inovacina), which aims at breaking the dependency and reducing the deficit in the trade balance through investment in production, development, and technological innovation for immunobiological production. Six vaccines considered priority – pentavalent, rabies in cellular culture, meningitis B and C, hepatitis A, and canine leishmaniasis – are in the final phase of development and should be in use within three years at most. The pentavalent, which will be produced in conjunction with Biomanguinhos and the Butantan Institute (SP), is going to unite the triple bacterial vaccine (against diphtheria, tetanus and whooping cough) with the Hepatitis B vaccines and *Haemofilus Influenzae* (bacterium that causes meningitis). It is estimated that within five years, eight more inputs will be produced in national labs: combined vaccine against meningitis B and C, rabies in tissue culture (for canine use), inactive yellow fever, *Streptococcus pneumoniae*, HPV (virus associated with cervical cancer), inactive poliomyelitis, DTPa (acellular vaccine against whooping cough, with fewer adverse reactions) and MMR (triple viral vaccine against mumps, measles and rubella). Six more vaccines are in the predevelopment stage and should be ready in the next ten years. The vaccine against leishmaniasis is predicted to be ready in 15 years.

Blood and blood products

Nearly 90% of the blood derivatives used in the country are currently imported; however, Brazilian plasma, raw material for manufacturing immunoglobulin and other blood derivatives, is exported. The importation of Factor VII, used in the care of 9000 coagulopathy carriers, cost the MS R$226 million in 2005.

The initial phase has begun for implementing the Brazilian blood derivatives and biotechnology company (Hemobrás).[34] When completed, it will ensure the industrial production of blood derivatives, based on the division of plasma obtained in Brazil and, in special cases, it will fraction plasma or intermediary products obtained abroad, in order to meet the country's domestic needs, or the needs of other countries, by contract. Hemobrás' industrial unit will be constructed in the pharmaceutical and biotechnology industrial park in the municipality of Goiana, in the metropolitan region of Recife, and will have the technological capacity to manufacture albumin, normal intravenous human immunoglobulin, and concentrates of factor VIII and factor IX.

Quality control of blood transfusions began in Brazil in 1980, with the incentive for voluntary donation and the initial implementation of a public blood center network. The use of

[33] Source: DAF/SCTI/MS.
[34] Established by Law No. 10.972 on 2 December 2004.

blood, other tissues, cells, and human organs for treatment of injuries is regulated and inspected by ANVISA, which sets standards and technical regulations, inspects the certified services, trains professionals, and monitors the occurrence of adverse events through the use of available technologies, aiming at ensuring the quality and safety of these treatments.

Since 1991, specific legislation has regulated the collection, processing, storage, distribution, and application of blood and blood products.[35] At the national level, ANVISA coordinates the national blood surveillance system. It is an evaluation and alert system organized to collect and evaluate information on the undesirable and/or unexpected effects of the use of blood products in order to prevent their occurrence or recurrence.

In 2006, the network included 33 coordinating blood centers and more than 2000 hemotherapy services registered by ANVISA. The blood centers are associated with universities, contributing to the training of specialized personnel and the scientific and technology development of the area.

2.4.7. Equipment and technology

Brazil is highly dependent on imports to meet the demand for medical-hospital equipment, especially for diagnostic imaging. Data from the Brazilian association of importers of medical-hospital equipment, products, and supplies (Abimed) show that importation of medical-hospital machines and equipments grew 23.3% in 2006 as compared to 2005. In 2004, the sector purchased almost US$1.3 billion from other countries. In 2005, imports reached US$1.57 billion. Last year, they rose to almost US$1.94 billion. The expected level for 2007 is above US$2 billion.

Regulation of technology incorporation has traditionally been a concern for the health system as a whole and not only for the SUS. In 2003, the MS instituted the council on science, technology, and innovation (CCTI), under the coordination of the department of science and technology/SCTI/MS (DECIT), to formulate guidelines and promote technological assessment of the incorporation of new products and processes for managers, providers, and professionals of SUS services.

The council is presided by the science, technology, and strategic inputs secretariat with members who are representatives of the secretariats of the Ministry of Health and linked organs, in addition to the regulatory agencies and the intersectoral commission on science and technology of the national health council. The CCTI is responsible for proposing and supporting measures to generate and disseminate scientific, technological, and innovative knowledge; implementing and monitoring the management of scientific and technological advances in the scope of the Ministry of Health; and defining guidelines and promoting technological assessment in health. One of the council's main actions was the creation of the working group in November 2003 to discuss the issues of SUS health technology evaluation.

In December 2005, the commission on national technological management policy (CPGT) was created. CPGT has representatives from various government areas and civil society. The national policy on health technologies management (PNGTS) aims at providing guidance to formulators and managers of the health system in decision-making on the activities related to the evaluation, incorporation, utilization, dissemination, and removal of technology in the health system. For this, PNGTS defines operating guidelines and identifies institutional responsibilities and intersectoral links deemed necessary to address technological management in health.

Other measures have been undertaken to improve the management of technological assessment in health. The health surveillance system initiated, in 2000, the certification of good practices in manufacturing and training of inspectors, especially in the area of equipment and diagnosis kits for *in vitro* testing. Brazil participates on forums for international standard harmonization, in MERCOSUR and the Global Harmonization Task Force. DECIT contracted, in 2004, the Cochrane Collaboration, through the Cochrane Center of Brazil, to help implement systematic revisions and train professionals and managers in the Ministry of Health. In May 2006, Brazil, through DECIT, was officially registered in the international network of agencies for

[35] Law No. 10.205, 21 March 2001.

health technology assessment (INAHTA), a network that includes nearly 45 agencies in 22 countries. In 2007, seven postgraduate courses on health technology management were established, promoted by the SAS and SCATIE Secretariats. This effort integrates the training and capacity-building strategy in human resources.

2.4.8. Quality of Service

The WHO World Health Survey (2004) reported that there is high user dissatisfaction (57.8%) with the health system in the country, both public and private, although the evaluations differ between private and public users. Nearly 72% of the private plan users expressed dissatisfaction, compared to 53.3% dissatisfaction among SUS users.

Another survey, conducted by the Ministry of Health together with the national council of health secretariats (Conass) in 2003, showed that more than 90% of the Brazilian population uses some SUS services. According to the survey, the waiting lines in hospital emergency rooms, the long waiting period for exams and surgeries, and the health units' inability to take patients are frequent complaints among SUS users.

In order to face these challenges, the MS has adopted regulatory measures, which include the training of professionals and the establishment of the HumanizaSUS. This program proposes a new relationship – between users, the professionals who serve them, and the community – so that the SUS is more welcoming, expeditious, and offers more comfortable installations.

Since 1995, the Brazilian hospital accreditation program[36] has been under implementation, based on the evaluation of services following standards defined in specific federal normative instruments.[37] In 1997, the MS promoted the definition of basic standards for the accreditation process (certification of accrediting institutions, training of evaluators, and code of ethics). The Brazilian accreditation is led by the national accreditation organization (ONA), a private organization of collective interest, recognized by the Ministry of Health,[38] founded in May 1999, which "*promotes development and implementation of ongoing process of evaluation and certification of the quality of health services,*" with voluntary adherence. This process has been implemented gradually; in 2005, only 45 hospitals, 2 blood centers, and 3 clinical laboratories had been accredited.

The SUS General Ombudsman office, a communication channel between the system and citizens, is responsible, among other things, for receiving claims, complains, praises, and suggestions from the citizens and bringing them to the attention of the responsible bodies. The SUS General Ombudsman Department was created by Decree No. 4.726, 9 June 2003, under the Ministry of Health, as an integral part of the strategic and participatory management secretariat.

2.5. Institutional Mapping of the Health Sector

The Brazilian health system is composed of two subsystems, public and private, which are subdivided into four segments in the provision of health activities and services.

[36] Ministry of Health. Decree GM/MS Nº 1.107, 14 June 1995.
[37] Ministry of Health. Secretariat of Health Policies. *Manual Brasileiro de Acreditação Hospitalar*. 2nd edition. Brasilia, 1999.
[38] Ministry of Health. Decree GM Nº 538, 17 April 2001, published in the *Diário Oficial da União* on 19 April 2001.

Figure 4: Health system organization in Brazil

Subsystem	Public		Private	
	Universal	Restricted	Pre-paid	Direct disbursement
Segment	Public: Union, states, and municipalities	Self-management/ Public organizations	Health plans and insurance plans (Supplementary)	Private, autonomous
% of the population (more frequent use)	75.4% (129.5 million in assistance) 100% if public health and health surveillance activities are included	5.1% (9 million)	19.5% (34.2 million)	....
% of total health expenditure	41.6%	...	21.0%	37.4%
Access	Universal	Captive clientele (institutional link)	Pre-paid or coverage by insurance	Direct disbursement
Financing	Taxes and social contributions	Public employees and employers	Employees and employers or family income; government subsidies *	Family income government subsidies *
Network of services used	Own (public federal, state or municipal), charitable or profitable	Own, private charitable, or profitable	Private profitable or charitable	Private profitable or charitable
Expected coverage	Comprehensive (public health activities, health promotion; basic care, specialized outpatient care, and hospital care; diagnostic and therapeutic procedures, pharmaceutical assistance)	Variable (in general, medical and hospital care; diagnostic and therapeutic procedures)	Variable (in general, medical and hospital care; diagnostic and therapeutic procedures)	Variable (in general medical and hospital care; diagnostic and therapeutic procedures; drugs)

Source: Piola, S. and Muds, E. 2005. * Note: Indirect subsidies, through fiscal exemptions granted to employer companies and to families.

The public health system is composed of three levels of management that share most of the functions of steering, management, financing, and provision in their respective areas.

Figure 5: Institutional and decision-making structure of the SUS

	Participatory Collegiate	Manager	Inter-Managerial Commissions
	Functions		
Functions	Steering	Steering Regulation Financing Provision	Steering Regulation
Levels	**Organizations Involved**		
National	National Health Council	Ministry of Health	Tripartite Commission
State	State Health Council	State Health Secretariat	Bipartite Commission
Municipal	Municipal Health Council	Municipal Health Secretariat	

3. MONITORING THE PROCESSES OF CHANGE/REFORM

3.1 Effects on health system functions

Figure 6: Events in the processes of change and incidence of health system functions

Functions	1990-1994		1995-1999		2000-2005	
Subsector	**Public**	**Private**	**Public**	**Private**	**Public**	**Private**
Steering	Implementation process begins; reorganization of the federal level; strengthening of the jurisdiction of municipalities	Expansion of supplementary health sector; absence of regulation	Strengthening of state jurisdiction; beginning of regionalization process	Approval of law that regulates private plans; creation of National Supplementary Health Agency	Approval of Health Pact; consolidation of the role of the state as coordinator	Consolidation of regulatory system; beginning of process of quality assessment
Financing	Predominantly federal; insufficient federal resources to address expansion of coverage; increase in municipal spending		Creation of CPMF, social contribution for health		Approval of Constitutional Amendment that links resources of the three spheres of government; growth of state and municipal financing	Process of economic concentration in the health plan operators
Assurance	Universal access		Universal access	Expansion of coverage by group private plans	Universal access	
Service Provision	Decentralization; transfer of basic network to municipalities; expansion of basic care		Strengthening of basic care; beginning of reorganization of basic care model		Strengthening of pharmaceutical assistance; expansion of dental assistance; investment in expansion and equipment of service network	

3.2. Effect on reform guiding principles

3.2.1. Equity

The achievement of the main objective of health system reform, to ensure universal access, has been slow but steady. Noticeable improvements in access conditions have been observed in all regions of the country. Coverage through basic care is practically universal in all the federal units, especially in immunization programs.

Inequalities persist, however, in coverage in rural areas and in river populations in the North. Inequalities also persist between different regions in the country in terms of available services and access to intermediate and specialized care. Higher-technology equipment is more predominant in private facilities, so there is greater concentration in the regions with higher average population income, which is also where coverage from private health plans is

concentrated. In the South, 80% of the diagnostic imaging equipment in 2005 belonged to private facilities. The supply of SUS equipment is relatively higher in the North and Northeast.

Table 14: Diagnostic imaging equipment existing in health facilities by administrative sphere, by region, Brazil, 2005

Regions	Diagnostic imaging equipment existing in health facilities						
	Total			Administrative sphere			
	Total	Available to SUS	% available to SUS	Public	Private		
					Total	% Private	SUS
Brazil	49,987	22,111	44	12,904	37,063	74.2	14,984
North	2,414	1,323	55	1,146	1,268	52.5	508
Northeast	9,881	4,933	50	3,036	6,845	69.3	3,248
Southeast	24,771	10,311	42	5,950	18,801	75.9	6,815
South	7,928	3,822	48	1,548	6,380	80.5	3,266
Center-West	4,993	1,722	34	1,224	3,769	75.5	1,147

One of the more serious inequalities in health in Brazil is access to dental care; since 2004, this inequality has been addressed through expansion of available services ("Smiling Brazil" program). There are extreme differences among the various income-level groups. Nearly 25% of the 5-19-year-old population in the country – approximately 42 million people – has never had access to this service. Difficulty in access is greater in the lowest-income households (51% of the population), but it is also a problem in residences with average income, although in much smaller percentage (1.5%). In the WHO World Health Survey, by CICT/Fiocruz in 2003, in the population with the lowest socioeconomic level, 56% of the women 50 years old and over had already lost all their natural teeth, while among men in the same income bracket the percentage was 19%. In the higher socioeconomic-level brackets, the percentages were 19% of women and 12% of men of the same age group, indicating, besides economic reasons, inequality in access to dental services due to gender.

Significant improvement in coverage can be observed in childbirth care: in 1986, the coverage did not exceed 80%; in 2004, it was 97%, and 99% in the Southeast, South, and Center-West. The lowest rate observed was in the North, at 90%.[39]

3.2.2. Coverage

If the year before approval of the Constitutional text instituting the right to universal health care access is taken as baseline, it is possible to identify clear changes in the inter-regional provision of activities and services (see Table 15). The number of consultations per person in the poorer regions (North, Northeast and Center-West) has increased significantly, reducing the previous inequality between these regions and the more affluent ones (South and Southeast).

Access to hospitalizations also grew in the North, Northeast, and Center-West, as SUS coverage has expanded. In the other regions, the number of hospitalizations fell per 100 population, as a result of technological changes, greater emphasis on prevention and outpatient care, and increases in private coverage.

[39] RIPSA, IDB 2006.

Table 15: Consultations and hospitalizations by the public system

Region	SUS Hospitalizations (Discharges)				Consultations			
	Per 100 inhabitants				Per inhabitant			
	1987	1995	2000	2005	1987	1995	2000	2005
Brazil	8.1	8.1	7.0	6.2	1.67	2.2	2.3	2.5
North	5.5	6.8	7.2	6.6	0.88	1.3	1.5	2.0
Northeast	6.2	8.2	7.6	6.4	1.09	1.9	2.1	2.2
Southeast	8.8	7.2	6.2	5.6	2.21	2.6	2.7	2.9
South	10.9	8.2	7.9	6.8	1.76	2.1	2.2	2.3
Center-West	8.1	7.1	7.7	7.2	1.23	2.3	2.1	2.4

Sources: (1) World Bank (1993) Brazil: The Organization, Delivery and Financing of Health Care in Brazil: Agenda for the 90s – Hospitalizations and consultations by unit, contracted and agreed-on with INAMPS; (2) RIPSA – IDB 2006

3.2.3. Resource Availability and Distribution

Brazil still does not have a national health accounting system. WHO estimated that Brazil's total health expenditure in 2004 was 8.8% of its GDP and that per capita public spending in health reached US$ 229 (US$ PPP) in 1997, for US$822 dollars PPP in 2004.[40] At the request of the Brazilian government, the calculations were reviewed, and, based on the new figures, public spending in health that year was estimated at R$65.1 billion, amounting to only 3.4% of the GDP and US$121 per capita current dollars or US$306 PPP per capita.

Table 16: Expenditure in health, Brazil, 2004

Total expenditure as % of GDP	8.80%
Public expenditure as % total expenditure	54.10%
Total expenditure per capita (US$)	1,520
Public expenditure per capita (US$)	822

Source: WHO, Statistics 2007

As a percentage of GDP, public spending showed slight, but consistent, annual growth over the last 5 years, rising from 2.9% in 2000 (the year the National Congress approved specific resources for health) to 3.47% in 2005. Federal expenditure remained stable during this period as a percentage of GDP. The growth can be attributed to contributions from the subnational spheres.

Table 17: Public expenditure in health in the last five years

	2000	2001	2002	2003	2004	2005
Public expenditure in health per capita (R$)	200.58	232.21	271.79	299.56	353.54	…
Public expenditure as a proportion of GDP	2.9	3.08	3.21	3.12	3.35	3.47
Federal expenditure as a proportion of GDP	1.85	1.87	1.84	1.75	1.85	…
% Federal expenditure in health/total federal expenditure	3.3	3.6	3.7	3.1	3.5	3.1

Sources: IDB 2006: Ministry of Health/SCTIE/DES/SIOPS; SE/SPO and the National Health Fund – FNS; IPEA and IBGE

[40] WHO. World Health Report 2004 and World Health Statistics 2007.

Family expenditures remain high, according to the results of the World Health Survey (2003). In the poorest socioeconomic bracket, health expenditure in 2003 was 13.9% of the family average expenditure per month; 58.9% of this expenditure was allocated to drug procurement. In the higher socioeconomic bracket, the greatest health expenditure item was the monthly payment of the health plan (37.9%), and health expenditure accounted for 21.4% of the average monthly family expenditure.

There was a notable increase in the number of health professionals in all regions of the country, especially in regions with the greatest deficit. In the North and Northeast, for example, the proportion of nurses per 1,000 population rose from between 0.11 and 0.25 in 1995 to between 0.48 and 0.53 in 2005.

Table 18: Health professionals per 1,000 pop., by region, 1995 and 2005, Brazil

Region	1995			2005		
	Doctors per 1000 pop.	Dentists per 1000 pop.	Nurses per 1000 pop.	Doctors per 1000 pop.	Dentists per 1000 pop.	Nurses per 1000 pop.
Entire Country	1.27	0.85	0.31	1.68	1.13	0.64
North	0.5	0.33	0.11	0.82	0.48	0.48
Northeast	0.73	0.4	0.25	0.99	0.53	0.53
Southeast	1.8	1.25	0.36	2.28	1.59	0.72
South	1.28	0.83	0.37	1.73	1.19	0.73
Center-West	1.11	0.87	0.33	1.68	1.29	0.65

Source: Ministry of Health – CGRH-SUS/SIRH

Regional distribution of hospital beds also showed greater homogeneity in 2005 as compared to 1990, significantly reducing the previous inequality.

Table 19: Regional distribution of hospital beds per 1000 population, Brazil, 1990-2005

Region	1990	1992	1999	2002	2005
Entire country	3,71	3,66	2,96	2,7	2,41
North	2,15	2,25	2,24	2,05	1,85
Northeast	2,92	3,06	2,74	2,5	2,27
Southeast	4,2	4,1	3,03	2,75	2,44
South	4,18	3,98	3,31	3,08	2,76
Center-West	4,49	4,19	3,46	3,05	2,62

Source: IBGE - Medical and Health Care Survey

3.2.4. Access

A 2003 household survey[41] indicated that 98% of individuals who sought attention were able to obtain it. Approximately 2.2% of the entire population reported difficulty in access – or that they sought care unsuccessfully, or did not seek it, despite needing it, due to barriers resulting from distance, cost, delay, or inadequate hours of operation. Although grave problems in access affect a small percentage of the population, serious delays in receiving care also exist, especially for exams, specialized consultations, and elective surgeries. In some municipalities, the wait for this type of attention can be up to one year.

[41] IBGE, national household survey (PNAD) in health, 2003.

Table 20: Persons according to demand for health care, 2003, Brazil

Situation	Number	%
Sought care and were treated	25,161,722	14.3
Sought care and were not treated	538,790	0.3
Did not seek care	150,287,100	85.4
Did not seek care because there was no need	145,272,010	85.4
Did not seek care due to difficulties in access (distance, cost, delay, or schedule)	3,375,267	1.92
Total population	**175,987,612**	**100**

Source: IBGE, PNAD Health 2003

Regional differences in access and quality remain high. The percentage of pregnant women receiving seven or more prenatal visits is extremely low in the North and Northeast, and is barely half of the coverage guaranteed in the South. On the other hand, in the Southeast and South – where most of the private coverage is concentrated – the rates of Cesarean births reach well over the parameter set by the MS, which is a maximum of 30%.

Table 21: Indicators on Cesarean births and prenatal care, by region, 1995, 2002, 2004, Brazil

Region	% Cesarean births			% of pregnancies with seven or more prenatal consultations		
	1995	2002	2004	1995	2002	2004
Entire country	**37.7**	**39.7**	**42.7**	**49.7**	**46.0**	**52.9**
North	32.4	30.4	33.2	37.5	25.8	28.7
Northeast	25.5	28.1	31.5	35.0	32.9	36.6
Southeast	46.5	47.9	50.5	62.8	56.3	66.5
South	43.2	44.3	48.2	55.9	53.2	65.7
Center-West	49.9	44.5	47.6	53.0	52.2	58.4

Source: RIPSA IDB 2006

3.2.5. Effectiveness

Important advances began in the 1980s, as shown by several indicators. The country's average infant mortality rate was estimated in the 1970-80 decade at 87.88 deaths of children under 1 year per 1,000 live births. However, regional disparities were enormous. The average rate in the Northeast was 121.4 and in the South 61.8. In 1991, the demographic census showed a significant drop in this rate to 41.75 per 1,000 live births, less than half that from the previous decade. This shift mainly resulted from the sharp drops observed in the South and Southeast during the 1980s.

Although there has been a general trend toward infant mortality reduction in all regions, the intensity was greater in the more-developed regions, thus deepening the differences among the regions: while in the 1970-80s, the rate in the Northeast was 1.96 times higher than in the South, in 1991 it was 2.65 times higher. This difference remained steady during the following years, in spite of the consistent drop in all regions throughout the country. In 2004, the rate in the Northeast continued to be 2.27 times higher than in the South and Southeast.

Table 22: Infant Mortality (deaths under 1 year old) per 1000 live births, Brazil, 1997 - 2004

Region	1997	2000	2002	2004
Brazil	31.9	26.77	24.34	22.58
North	32.19	28.72	26.98	25.51
Northeast	50.36	41.4	37.24	33.94
Southeast	23.06	18	15.73	14.92
South	17.54	17.03	16.05	14.98
Center-West	24.36	20.95	19.26	18.7

Sources: MS/SVS – Live Births Information System – SINASC
MS/SVS – Mortality information System – SIM

The differences in child mortality rate by income and race continue to be significant. PNAD data from 1996 showed that for the population self-defined as black or brown and presenting higher levels of exclusion and extreme poverty, the child mortality rate was 62.3 per 1,000 live births, while the rate observed for the target population was 37.3 per 1,000.[42]

Regional differences also persist in statistics on proportional mortality from acute diarrheal disease and acute respiratory infection for children under 5. Although these rates have dropped in all regions, the drop was sharper in the Southeast and South.

Table 23: Mortality from specific causes in children under 5 years of age, Brazil, 1995-2004

Region	Acute diarrheal disease			Acute respiratory infection		
	1995	2000	2004	1995	2000	2004
Brazil	8.27	4.53	3.97	9.42	5.94	5.76
North	9.21	5.04	4.89	8.49	6.34	7.41
Northeast	12.96	6.68	6.19	8.08	5.32	5.31
Southeast	5.38	2.59	1.87	10.48	6.51	5.73
South	5.82	3.23	2.13	10.67	5.91	5.19
Center-West	6.79	4.45	3.91	8.13	5.61	6.23

Source: Ministry of Health/SVS – Mortality Information System (SIM)
RIPSA.IDB 2006

The percentage of children with low birth-weight has remained stable, around 8%, over the last ten years.

Table 24: Proportion of live births with low birth weight, by year, by region, Brazil, 1995-2004

Region	1995	1998	2000	2002	2004
Brazil	7.94	7.93	7.7	8.13	8.24
North	6.61	6.46	6.32	6.76	6.97
Northeast	7.01	7.14	6.79	7.24	7.5
Southeast	9.03	8.8	8.62	9.13	9.14
South	7.84	8.11	8.1	8.64	8.63
Center-West	7.12	7.28	7.05	7.39	7.58

Source: Ministry of Health/SVS – Live Births Information System (SINASC)

[42] IBGE-PNAD 1996.

3.2.6. Efficiency

The health system, both public and private, has sought greater efficiency in the allocation and use of resources. Efficiency has been sought through the implementation of monitoring and evaluation programs, growing use of clinical protocols and guidelines, implementation of regulatory centers, and development of technology assessment.

In terms of health determinants, improvements have been observed in basic sanitation coverage, although significant differences in access to these services persist, which are region and income-related.

Table 25: Basic Sanitation, Brazil, 1996-2004

Indicators	1995	1998	2000	2002	2004
% of population with access to water system	74.52	77.31	75.83	80.49	80.78
% of population connected to sewerage system	56.97	61.36	59.15	65.59	67.18
% of population with garbage collection system	69.46	76.18	76.42	83.01	83.93

Source: RIPSA, IDB 2006

3.2.7. Sustainability

SUS sustainability is associated with three factors: the existence of a consolidated constitutional and legal framework; the existence of financing mechanisms that ensure the regular allocation of resources – although insufficient – by the three levels of government as well as political and social legitimacy.

The public health system has achieved increasing legitimacy, despite ongoing deficiencies and shortcomings. Opinion surveys on health indicate the population's growing satisfaction with available services. Criticisms are related to the delays in care, long waiting lines, and shortages of drugs.

In a 1996 public opinion survey, 45% of the interviewees considered that public health services had improved and 30% said they remained the same, in which the index of approval was greater among users of the system than among non-users: 51% of users indicated that they were 70% - 100% satisfied with their last SUS treatment.

The WHO World Health Survey (2003) reiterates this trend toward greater approval on the part of users than that shown by the entire population: although 58% of the interviewees expressed dissatisfaction with the health system (public and private), when the last care received was reviewed, most aspects subject to review were considered *good* or *very good* in percentages over 60% by SUS users. Users were least satisfied with waiting times, the possibility of selecting a doctor, and participation in decision-making on treatment. Public opinion surveys conducted in 2000 by the national federation of industries reported 88% satisfaction with the public health system.

In the management plan, the managers recognize the importance of the interagency commissions as spaces for negotiation and agreement on the allocation of resources and programming of interventions. They are, therefore, consolidated forums in the system.

Important advances were made, starting with the implementation of health sector reform, in improving the public system's *accountability*. The availability of information on the Internet, through Datasus, associated with the oversight activities of the health councils, has expanded the democratization of information and significantly reduced the occurrence of fraud in the system, impacting on public opinion.

There is growing importance of the issue of health on the political agenda, which has ensured steady resistance to the pressure of groups opposed to making resources available to achieve universal access. The existence of resources constitutionally marked for public health actions and services is a reflection of this movement and ensures financial sustainability for the system. International resources are not significant in the health budget, representing under 1%, and are targeted at financing support for new program activities and investments.

3.2.8. Social participation

Increased participation of civil society in identifying problems, and planning and implementing actions in health is one of the greatest advances achieved in the process of construction of the SUS. Social participation is associated with greater publicity of information and decision-making processes, especially as a result of the activities of the health councils and conferences. These forums allow the dissemination of the population's demands and greater adaptation of actions offered by the system. Currently, councils composed of users (50%), health professionals, service provider representatives, and the government act at the federal level and in 26 states and 5,590 municipalities.

Social participation, thus, is not limited to the system's top management level. Many units and public hospitals have been establishing councils or other advisory forums directly connected to their directorate, with significant user representation.

The level of participation also started to grow in 1986 when the national health conferences became more open, and stopped being characterized as technical forums, and municipal and state health conferences began being held regularly. Besides those conferences legally required, with defined schedules, conferences on special topics have been held – oral health, workers' health, human resources, women's health, science and technology, indigenous health – which enrich debates and establish specific guidelines.

The Ministry of Health also published the charter of consumers' rights in health with the purpose of disseminating these rights to the citizenship and maintaining the SUS ombudsman as a channel between the health system and the population.

The Oswaldo Cruz Foundation, in turn, maintains the Health Channel, an ongoing project whose principal concern is to disseminate the broad concept of health through a comprehensive vision that incorporates issues on quality of life, environmental quality, sanitation, nutrition, and prevention, etc. Its programming includes the dissemination of educational programs aimed at health professionals and at system users. It operates via satellite, captured through satellite dishes, and maintains an open weekly TV program.

3.3 Stakeholders

During the two decades that have passed since formulation of the proposal to reorganize the country's health system, many stakeholders have played a relevant role at different moments in the process.

The health sector reform's initiation coincided with the beginning of the country's return to democracy after the military dictatorship. It was the moment of the emergence of social movements voicing demands that had been repressed for twenty years during the absence of freedom of expression.

Strong adherence to the proposal to reorganize the health sector arose from the fact that it reflected the principal values of the Brazilian society in the period. From a broader perspective, the proposal was based on principles associated with social justice, citizen participation, overcoming inequality, and recognition of equality as a human right. From the standpoint of the organization of the state, the proposal advocated decentralization, democratization of the decision-making processes, and articulation of public policies.

In this context, the proposals gained legitimacy and were victorious in the struggle against strong pressures from domestic and international sectors that clamored for reforms under the doctrine of minimalist government and the targeting of social policy for the population sectors below the poverty line. It succeeded, thus, in incorporating in the Constitutional text the institutional precepts of the social security system offering universal guarantees of social protection, including the universal right to health, and attributed to the State the responsibility for ensuring it through actions on its determinants and the availability of comprehensive health care services. The Constitution of 1988 consecrated the thesis of unification of the public health system, establishing a unified health system that would come to surpass the fragmentation between care for the population covered by social security and the population excluded from the formal job market.

At first, during the formulation of proposals and political articulation around them, a broad range of social forces played a relevant role. In defense of the proposal, the universities joined the health sector reform movement, especially in the areas of public health and social medicine; important segments of health professionals; several political parties; parts of the labor movement; some segments of the state and social movements, particularly those concerned with health issues, the women's movement, and social rights.

In the next stage, establishing the Constitutional and legal framework, this range was expanded, with the incorporation of political parties with representation in the federal legislature, culminating in the creation of the multi-party Parliamentary Health Front. In resistance to the changes advocated, professional segments linked to the social security medical care, important sectors of private providers of health care to the state, especially those of private for-profit hospital care (who feared the results of a proposal that would produce a rupture with the preexisting hospital-centric system), in addition to government sectors linked to the economic area with its traditional fiscal concerns.

Beginning in the early 1990s, with the unleashing of measures for implementing the SUS, important changes occurred in the health scenario. The decentralization and institutionalization of forums for social participation (health councils and health conferences) brought new stakeholders to the scene. Acting in the sphere of the system's organization and management were subnational managers, health advisors, service providers, movements of users of the system, patient organizations, groups of relatives of pathology carriers, health professionals integrated in the system – all these were, and still are, stakeholders who played a role at this stage.

Implementation of policies to expand coverage also transformed the public health system in a privileged arena for commercial interests and companies that manufacture drugs, medical equipment and supplies that come to act, directly or indirectly, in the contest for this market and in the induction of technological incorporation. Their marketing strategies involve mainly doctors, pharmacists, and, more recently, the civic associations of pathology carriers.

Print and television media play a key role in this process: they expose access barriers, poor quality of health care, and other shortcomings of the public system as well as the problems encountered by private health plan users, and identify successful experiences. For some, the achievements do not receive the attention they deserve. For others, the media portrays, in even measure, the disproportion between problems yet to resolve and the undeniable successes achieved. At the same time, the media operate as a source of information on new drugs and equipment, motivating and strengthening the pressure for incorporating "state-of-the-art" technology.

In recent years, the Judiciary branch, the Public Ministry, and consumer protection organizations have came to play an unprecedented role, above all in favor of the health system's adherence to the legal precepts that regulate the sector, whether in ensuring the right to health care access, or in the oversight to ensure that the contracts governing the relations between private insurance plans and their users are respected.

The relationships between the Judiciary/Public Ministry and the Executive branch is at times collaborative and at times conflictive. The experience of implementing a national policy, such as the SUS, with a clearly defined legal and institutional framework and democratic decision-making process, in a political-institutional environment marked by political favoritism, has a large impact on federal public management.

The system's consolidation resulted in visible influence of the SUS on the institutional design of other public policy areas. The "SUS model" clearly influenced the formulation of the unified system of social welfare (SUAS) and the unified system of public safety (SUSP). The national health conferences also model the format of social participation and democratization of the decision-making process in many areas of government management (environment, science and technology, agricultural policies, etc.).

Table 26: Reorganization of the public health system, processes, and stakeholders, Brazil

Stage	Processes	Key Stakeholders
1- Formulate proposal to reorganize the health system (1978-1986)	- Doctrinal design - Preparation of proposals for Constitutional text - Policy articulation - Obtain social legitimacy	Health sector reform movement: university; health professional sectors; state personnel sectors; unions; social movement groups
2- Inclusion in Constitutional text and preparation of regulatory legislation (1986-1990)	- Formulate proposal for legal text - Policy articulation	Reform movement Health workers National Congress (Legislative) MS Ministry of Finance
3- Implementation of legislation; decentralization (1990-1999)	- Regulation of processes to implement legislation - Unification of public system - Transfer of responsibilities to the subnational spheres - Policy implementation (strengthening basic care) - Establish health councils	MS Conasems Conass Organizations of health professionals Social movements and NGOs Private providers
4- Activities to consolidate the system (after 2000)	- Proposals to regionalize the health care network - Expand access to more complex procedures (transplants, special drugs) - Creation of regulatory agencies (ANS and ANVISA) - Strengthen national policy - Health pact	MS CONASS CONASEMS Private Providers Social movements and NGOs Organizations of health professionals Operators of health/insurance plans Companies that produce supplies (drugs and equipment)

4. FINAL CONSIDERATIONS

In 2008, the SUS completed 20 years since it was created in the Constitutional text and 15 years since implementation of the legal precepts that regulate it. Great strides have been made and serious challenges remain ahead.

The greatest progress is, without a doubt, that 75% of the previously excluded population now has access to health services. It is true that nearly 25% of the population uses health plans and insurance – the same proportion that, before the system's reform, benefited from the public social security system restricted to workers in the formal job market. However, this segment also benefits from preventive care actions, regulatory actions, and monitoring provided by the health system, in addition to the availability of more expensive and complex services, such as transplants and the use of high-cost drugs.

The system offers services on a massive scale. In 2006, it covered 87 million people served by 27,000 family health teams, in 92% of Brazil's municipalities. That year it provided 2.3 billion outpatient procedures, 300 million medical consultations, and 11.5 million hospitalizations. It performed 15,000 transplants and more than 200,000 heart surgeries.

A decentralization process was implemented that ensured the effective participation of all spheres of government in management and financing of the system. Intergovernmental coordination mechanisms were created – the Tripartite and Bipartite Interagency Commissions – which have been very effective in the articulation of actions and conflict resolution. The social participation forums – conferences and councils – have been consolidated throughout the country.

All these advances do not eclipse the identification of bottlenecks that need to be overcome and challenges to be faced. Ensuring universal access to comprehensive care, in particular surpassing the difficulties in access to intermediate care requires an investment policy for this objective, channeling efforts to organize regional networks, with the expansion and certification of the public services network. Improving the quality and effectiveness of services offered involves efforts to ensure equipment, availability of inputs, certification and ongoing professional development activities, in addition to investments in improving interpersonal relations among professionals and between the professionals and consumers.

For all this it is essential to ensure an adequate flow of resources. Public spending in Brazil today – 3.4% of the country's GDP – is less that half the amount allocated by other countries with universal access systems (they spend, as a rule, 7.3% of their GDP to finance their health system). To expand the volume of resources and sustain the mechanisms that confer regularity on the system's financing are prerequisites for consolidating the advances and improvements still needed.

References

1. Almeida, Célia, O Mercado Privado de Serviços de Saúde no Brasil - IPEA -1998
2. Barros, Elizabeth - Integralidade e equidade no acesso aos procedimentos de alta complexidade: um desafio para o SUS, BSB, 2001
3. Boletim Epidemiológico AIDS Ano XIII nº 3 outubro dezembro 2000
4. Emenda Constitucional 29/2000
5. Home Page do Ministério da Saúde
6. IBGE - PNAD 1998: Acesso e Utilização de Serviços de Saúde, RJ 2000
7. IBGE - Síntese de Indicadores Sociais 2004, RJ, 2005
8. Instituto Brasileiro de Geografia e Estatística. IBGE, Indicadores 2000
9. Instituto Brasileiro de Geografia e Estatística. Indicadores Sociais Mínimos.
10. IPEA - Fernandes et alii, Gasto Social , TD IPEA, 1998
11. IPEA - Piola, Ribeiro & Reis - Gasto em Saúde, TD IPEA, 2000
12. IPEA - Piola, Ribeiro & Servo - Gasto em Saúde, 2005 mimeo
13. Leis 8080/90 e 8142/90
14. Marques, Rosa e Mendes, Áquilas - SP, 2000
15. MPO/ Relatório de Avaliação do PPA e IBGE , março de 2001
16. Negri, B e Giovanni, G. - Radiografia da Saúde no Brasil - UNICAMP/MS, 2002
17. MS - Saúde Brasil 2004 Uma Análise da Situação de Saúde - BSB, 2004
18. SIS/MS - Estimativas de Impacto da Vinculação Constitucional de recursos para a saúde- Cadernos de Economia da Saúde 1 - BSB - 2001
19. Vianna ,Solon M.; Nunes, André; Barata, Rita B. e Santos, James Richard S. - Medindo as desigualdades em saúde no Brasil: uma proposta de monitoramento - IPEA/OPS - Brasília, 2001