

URUGUAY



Sources: Second Administrative Level Boundaries Dataset (SALB), a dataset that forms part of the United Nations Geographic Database, available at: http://www.who.int/whosis/database/gis/salb/salb_home.htm, and the Digital Chart of the World (DCW) located at: <http://www.maproom.psu.edu/dcw>. The boundaries and names shown here are intended for illustration purposes only, and do not imply official endorsement or acceptance by the Pan American Health Organization.

The Eastern Republic of Uruguay is bordered on the west by Argentina, on the north and northeast by the Federative Republic of Brazil, and on the east and south by the Atlantic Ocean and the Río de la Plata. It has a land area of 176,215 km² and a maritime area of 125,057 km². It has uneven terrain, with an average elevation of 117 m and a maximum of 514 m, and fertile lowlands along the coast. The climate is temperate, with four seasons during which there is occasional frost and hail, strong winds, droughts, and floods.

GENERAL CONTEXT AND HEALTH DETERMINANTS

The population is 3,241,003 (1) and is largely concentrated in the capital of Montevideo (41%). Males comprise 48.3% of the population, and 51.7% is female.

Uruguay is a representative democracy, with elections every five years. The country is divided into 19 departments, governed by Departmental Councils (31 members) and an Intendant. The national government is made up of the Executive Branch, consisting of the President and 13 ministers; the Legislative Branch, which has two houses—the Senate and the Chamber of Deputies; and the Judicial Branch, comprised of the Supreme Court of Justice and other courts. The 2004 national elections were won by a leftist coalition, for the first time in the history of the country, and the new government took office on March 1, 2005.

Social, Political, and Economic Determinants

Uruguay has a Human Development Index (HDI) of 0.838 and ranks 46th in the world (2). During 2000–2004, the economy went through a recession, and in 2002 suffered a severe economic crisis with a decline in employment and serious consequences to the financial system. The per capita gross domestic product (GDP) went from US\$ 6,043 in 2000 to its lowest level in 2003 at US\$ 3,309, and by 2005 was at US\$ 5,081. The unemployment rate was 12.6% in 2000, rose to 16.9% in 2002, and was 12.2% in 2005. The fall of the GDP, the increase of the unemployment rate, and the indebtedness in dollars of the urban and rural population have made the situation of poverty more acute throughout the country. In 1999, 15.3% of the population lived below the poverty line, a level which rose to 32.1% by 2004, concentrated largely among children (56.5% of boys and girls between 0 and 5 years lived below the poverty line in 2004) (3, 4). The increase in poverty and the subsequent loss of social security generated direct impacts on the health system of the coun-

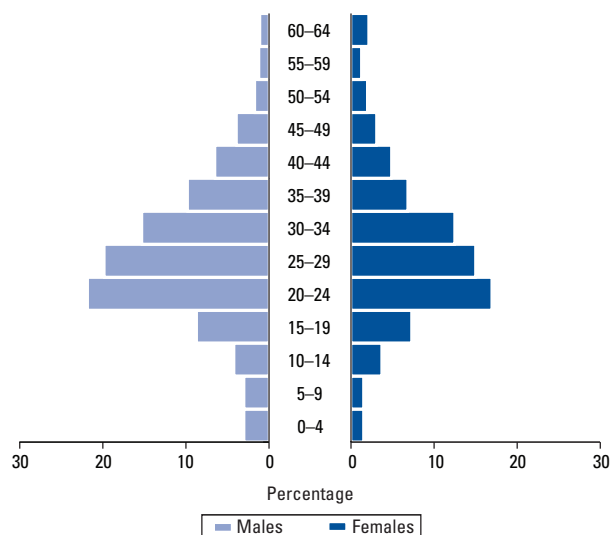
try. The population seeking care in the public sector increased without a corresponding increase in spending by sector type (either public or private). Approximately 5.4% of the population lives in informal settlements. Montevideo is the department that has the highest concentration of these informal settlements (10.1% of the population). The distribution by age of the population living in these settlements differs from the general distribution of the population: 26% of the population of these settlements is between the ages of 0 and 9 years, and 64% are adolescents or youth (1).

The economic crisis has also worsened international emigration, with many youth and adults emigrating to other countries, as shown in Figure 1. Between 1996 and 2004, 122,000 persons emigrated, representing one fifth of the average number of total annual births in that period.

In 2004, 27.1% of persons in the lowest income quintile had between 0 and 3 years of formal education, while 7.5% in the highest quintile had achieved the same number of years of education. In the lowest quintile, only 2.0% of people had finished 13 years or more of education, while 38% in the highest quintile reached this level (5).

Since 2003 it has been obligatory to complete 10 years of education (seven years of primary school and three of secondary school or technical education). According to 2004 data from the National Institute of Statistics (INE), the proportion of persons between 14 and 15 years of age who completed six years of study was 62.9% among men and 95.8% among women. Among those aged 20 and 21 years, the percentages who completed 12 years of education were lower: 32.3% of men and 42.7% of women.

Illiteracy (quantified by the National Expanded Household Survey, 2006) (6) is 2.3% of the total population of the country (2.7% of men and 2.0% of women). However, in Montevideo, illiteracy is somewhat less than 2.0%, and in the smallest communities and rural areas it is almost at 4.0%. Illiterate men outnumber women in all ages, with the greatest difference in persons aged 65 years and older (5.6% of men and 4.4% of women).

FIGURE 1. Structure of the population emigrating from Uruguay, 1996–2004.

Source: Uruguay, Instituto Nacional de Estadística, Censo 2004, Fase 1. Summary of results for the entire country.

Illiteracy among men who live in informal settlements is 6.1% while among women it is 4.7%.

While women have more years of education than men, the situation is completely the inverse in terms of their insertion in the workforce and remuneration. The rate of employment in urban areas in 2004 was 62.9% for men and 40.6% for women.

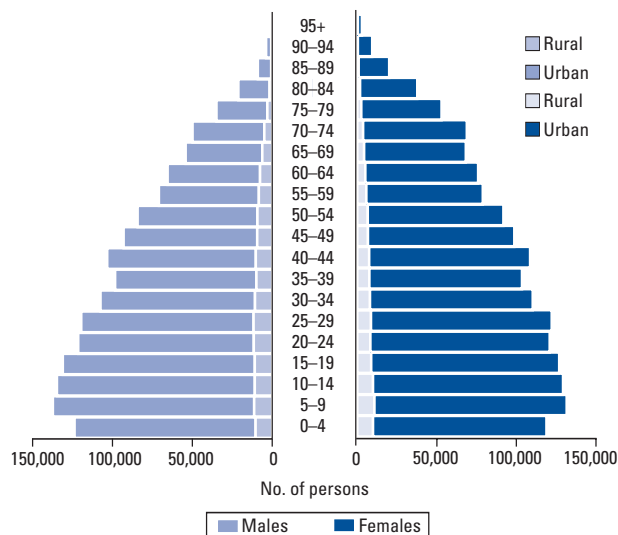
Demographics, Mortality, and Morbidity

The annual rate of demographic growth for the entire country (2005) was 0.6%. Ninety-two percent of the Uruguayan population lives in urban areas, and 8.0% live in rural areas. The urban population grows at an annual rate of 4.3% per 1,000 inhabitants, while the rural population decreases at an intercensal mean annual rate of 11.2 per 1,000 population.

By age distribution, persons aged 65 years and older constitute 13.4% of the population. As shown in Figure 2, those 80 years and older represent 3.2% of the total population in Uruguay.

In effect, the aging of the population is a demographic characteristic and the population pyramid (2004) takes the form of a spindle. Such aging is accompanied by a simultaneous decrease in births. The oldest population grows at an average annual rate of 8.5 per 1,000 while the rest of the age groups grow at a rate of 2.4 per 1,000.

As seen in Figure 3, the period 2001–2004 shows a decline in the number of births. The total rate of fertility dropped to 2.5 children per woman in 1996 to 2.1 children per woman in 2004. Adolescent pregnancies show clear differences based on the so-

FIGURE 2. Population structure, by age, sex, and geographic area, Uruguay, 2004.

Source: Uruguay, Instituto Nacional de Estadística. Censo 2004, Fase I, Síntesis de resultados.

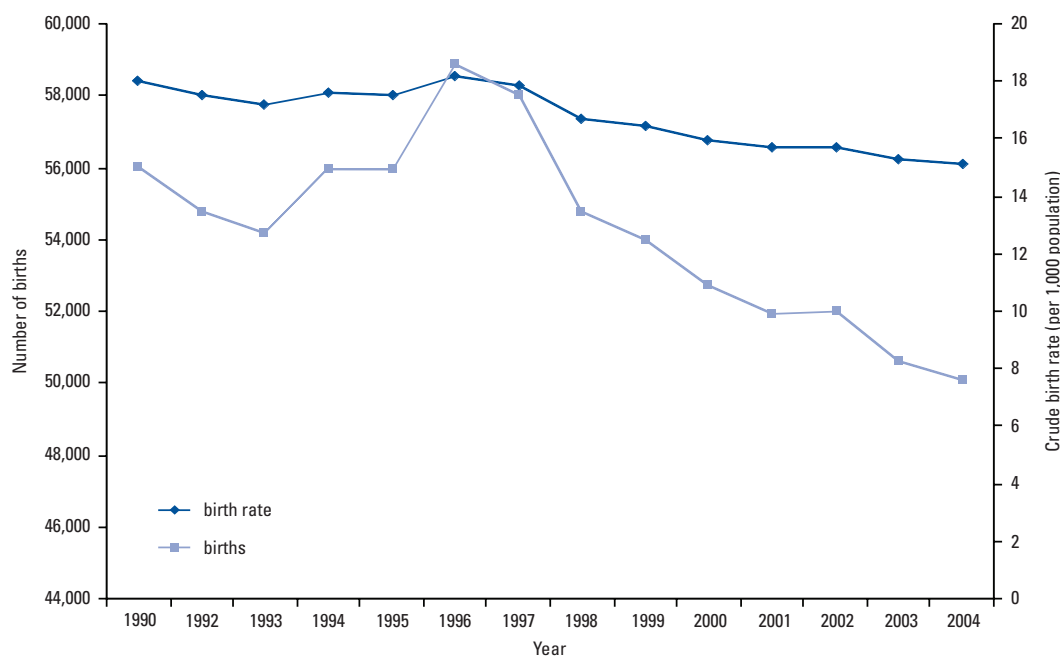
cioeconomic status of the mother. While in Montevideo (where 38% of all people are born) 4.8% of women of high socioeconomic level have their first child before turning 18 years of age, 30.7% of women of low socioeconomic level have their first child before turning 18. The crude birth rate was 15.1 live births per 1,000 population in 2004, which represents a decrease compared to previous years. Life expectancy at birth is 75.3 years on average for both sexes, with a difference of more than 7 years between the sexes: 78.9 years for women and 71.6 years for men.

A national death registry exists, under the oversight of the Civil Registry Office, with data collected by the Ministry of Public Health. All death certificates must be signed by a physician (Law No. 5453, May 1942). In 1997, Uruguay began using the International Classification of Diseases, Tenth Edition (ICD-10). Approximately 65% of all deaths occur in hospitals or in other health institutions.

The crude mortality rate was 9.76 per 1,000 population in 2004 (32,220 deaths). According to available data from 2003 (7), 80% of the deaths were due to the following largest groups of causes (ICD-10): diseases of the circulatory system (33.6%); tumors (neoplasms) (23.4%); diseases of the respiratory system (9.4%); symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (8.2%); and external causes (5.7%).

In 2005, the infant mortality rate was 12.7 per 1,000 live births, with a neonatal mortality rate of 7.1 per 1,000 live births and a post-neonatal mortality rate of 5.6 per 1,000 live births (8).

The rate of infant mortality dropped from 29.4 per 1,000 live births in 1985 to 12.7 per 1,000 live births in 2005. This decrease

FIGURE 3. Registered births and crude birth rate, Uruguay, 1990–2004.

Source: INE. Censo 2004, Fase 1, synthesis of results.

(56.8%) is principally due to the decrease in infant mortality of children receiving care in public sector health institutions (which decreased two-thirds, while in the public sector institutions infant mortality rate decreased one third). Between 1986 and 2001, the infant mortality rate decreased 44.3% in Montevideo, while in the rest of the country it decreased 53.9%. While the rates of infant mortality declined between 1997 and 2002, differences exist among the different departments: the highest rate of infant mortality was registered in the northeastern parts of the country (Rivera, Cerro Largo, Tacuarembó), while those located south of the Rio Negro presented lower rates (9). In Montevideo, those neighborhoods with poorer housing conditions, such as makeshift or precarious housing with poor access to sanitation facilities and maternal-child care, had higher rates of infant mortality.

HEALTH OF POPULATION GROUPS

Children under 5 Years Old

Since 1996, there has been a decrease in the number of births, with 50,051 births in 2004 (the crude birth rate declined from 18.2 per 1,000 in 1996 to 15.2 per 1,000 in 2004). Of births in 2004, 37.0% were in Montevideo and 63.0% in the rest of the country. Low-birthweight infants (less than 2,500 grams) comprised 8.6% of the newborns. Among children less than one year of age, congenital malformations were the principal cause of

death (24.0%). The second most important cause of death was intrauterine hypoxia and other difficulties or respiratory conditions of newborns (13.0%), and bacterial sepsis was the third leading cause (9.0%). The number of cases of congenital syphilis notified and confirmed in 2005 in Uruguay was 29 (rate of 0.6 per 1,000 live births). It should be noted that there is an unquantified underregistration of cases. In the population of children 1–4 years of age, the three principal causes of death were accidents and adverse effects (23.9%), congenital anomalies (13.8%), and acute respiratory infections and pneumonia (11.0%).

Children 5–9 Years Old

In 2004, accidents were the cause of 39.5% of the deaths in this age group, followed by deaths due to tumors (17.3%). In 1999 the three pediatric departments of the School of Medicine of the University of the Republic incorporated into the curriculum a strategy on Integrated Management of Childhood Illness (AIEPI) for undergraduates in medical studies. In 2001, the Ministry of Public Health and the School of Medicine signed an agreement for its joint implementation into all primary care for the country. While several workshops and training courses have been conducted, so far the direct impact has not been measured to determine what they might have contributed to the decline in most common childhood illnesses.

Adolescents 10–19 Years Old

As with children between 5 and 9 years of age, in 2004, accidents were the principal cause of death for the group between 10 and 19 years of age (33.2% of the deaths in this group). The second most common cause was suicides (12.5%), followed by tumors (9.5%) and violence or homicides (9.1%). Adolescent pregnancy constituted 16.5% of the total number of pregnancies in 2001.

Adults 20–59 Years Old

Of the 32,220 deaths in 2004, 15% occurred in this age group. Sixty-nine percent of these deaths were due to three principal causes: tumors (30.0%), diseases of the circulatory system (20.0%), and external causes (19.0%).

In terms of maternal mortality, in 2005, 11 deaths were registered, four of those due to complications from abortion, for a maternal mortality rate of 23.3 per 100,000 live births.

Older Adults 60 Years Old and Older

The principal causes of death in this age group were diseases of the circulatory system (2,274 per 100,000 persons 60 years and older), tumors (1,405 per 100,000), and chronic diseases of the lower respiratory system, acute respiratory infections, and pneumonia (620 per 100,000).

Persons with Disabilities

The first National Survey of People with Disabilities was conducted between September 2003 and August 2004 (10). The principal results show a prevalence of disabilities of 7.6% in the general population (estimated 210,400 disabled persons). No significant differences in prevalence were found between the capital and the rest of the country. Women have a higher prevalence (8.2%) than men (7.0%). More than half of the persons with at least one disability (50.8%) were 65 years or older, followed by persons aged 50 to 64 years (18.4%) and by persons aged 30–49 years (12.9%). There is an increase in the prevalence of disability with age, with one of every four older adults developing a disability. The majority of the population with disabilities (66.0%) has only one disability, independent of gender. The survey participants attributed their disability in 51.0% of the cases to an illness, 21.0% to birth, 18.0% to aging, and 9.0% to an accident. Twenty-one percent of the disabled reported that they needed help in caring for themselves and 40.0% required assistance to leave their homes.

The main disabilities reported were difficulties in walking (33%), vision (25%), and hearing (13.6%). The proportion of persons with a disability with a low level of education (37.0%) is much higher than those who are not disabled (12.6%). Only 16.5% of economically active persons with a disability are employed, versus 53.4% of those without a disability.

HEALTH CONDITIONS AND PROBLEMS

COMMUNICABLE DISEASES

Vector-borne Diseases

One potential problem is the reintroduction of the *Aedes aegypti* mosquito, along with the possible appearance of cases of **dengue**, which was newly detected in 1997 after being absent since its eradication in 1958. Through a rigorous prevention plan, infestation is limited to certain geographic zones (basically to three cities: Salto, Mercedes, and Fray Bentos). No native cases of dengue have been notified (since August 2006), although some have been found in neighboring countries.

Uruguay has controlled **Chagas' disease** to a large extent. Its main vector, *Triatoma infestans*, was present in two thirds of the national territory, but by 1997, the specific vector control program, integrated in the Southern Cone Chagas Control Initiative, had managed to eliminate or minimize household infestation. Successive international evaluations in 1998, 1999, and 2000 certified this accomplishment, and Uruguay is the first endemic country to interrupt transmission. Surveillance and control currently continue in an effort to completely eliminate *T. infestans*.

The pulmonary syndrome of **hantavirus** was first seen in the country in 1997, and since then has maintained a low annual incidence (0.22 cases per 100,000 population) in the entire southern region of the country. Its average lethality was 24%, and 72% of the cases were among men (2006). The most important risk factor is living or working in rural areas. The wild rodent involved is the *Oligorhizomys flavescens*.

The prevalence rate of **leprosy** for all of Uruguay in 2005 was 0.04 per 10,000 population. The highest rates were registered in two departments of the northeast coast, Artigas (0.53 per 10,000) and Río Negro (0.19 per 10,000). Montevideo had a rate of 0.01 per 10,000. The number of notified and confirmed annual cases of leprosy in Uruguay dropped from 628 in 1989 to 15 in 2002. Between 10 and 20 cases are notified and confirmed annually throughout the entire country.

Vaccine-preventable Diseases

Since the beginning of the 1980s, no cases of **poliomyelitis**, **neonatal tetanus**, or **diphtheria** have been found. In 1999, the last cases of **measles** were registered, and currently eradication is in process. No cases of **rubella** have been found since 2002 either. In 2005, an outbreak of **infectious parotitis (mumps)** in Montevideo occurred, largely affecting youth between 18 and 24 years of age, who had received only one dosage of the vaccine. More than 2,500 cases occurred, but no deaths were reported. Obligatory vaccination against **chickenpox** began in 1999.

Between 2002 and 2005, the vaccination coverage among children less than one year of age was greater than 95% for all the different vaccines included in the Expanded Immunization Program (EIP) (11), which in 2006 were: diphtheria, hepatitis b,

parotitis, poliomyelitis, rubella, measles, tetanus, whooping cough, tuberculosis, chickenpox, meningitis, and other infections such as *Haemophilus influenzae* type b.

The number of notified and confirmed cases of **viral hepatitis A** during 2005 was 2,877 (88.7 cases per 100,000 population); San José (633 cases per 100,000), Artigas (608 per 100,000), Canelones (89.9 per 100,000), and Montevideo (34.2 per 100,000) were the departments with the most cases.

Chronic Communicable Diseases

Since the mid-1990s, the incidence of **tuberculosis** cases has not shown substantial changes, with an average of 650 new cases being registered annually (annual rate of 20.0 per 100,000 population). However, 729 cases were registered in 2004 and 723 cases were registered in 2005 (rate of 22.3 per 100,000 population).

HIV infection has brought about an increase in the number of tuberculosis cases. On average, during 1994–2004, 10% of the cases of tuberculosis were among HIV/AIDS patients, and 12% of the cases registered in 2005 were carriers of the infection. The co-infected patients with tuberculosis and HIV/AIDS are largely young adults, especially between 25 and 34 years. A significantly larger number of patients with biologically unconfirmed pulmonary tuberculosis exists in relation to the HIV-negative tuberculosis population. The rate of abandonment of treatment is greater among HIV-negative patients. Until 2005, no major tendency in the development of TB drug resistance was seen in the Uruguayan population. Another unique situation is overpopulation of detention centers where more than 600 cases of TB per 100,000 are registered in some centers, which is a rate 30 times greater than in the general population.

HIV/AIDS and Other Sexually Transmitted Infections

As of 2005, the HIV/AIDS epidemic was largely driven by sexual transmission (71%; prevalence of 1,975 cases in that year), particularly through heterosexual transmission (63%). Transmission through infected blood was responsible for 25.4% of the cases (prevalence of 706 cases in 2005) and perinatal transmission was responsible for 3.6% of the cases (prevalence of 101 cases in 2005). Sentinel studies in 2000 showed the HIV prevalence to be 0.23% of the population, rising to 0.45% in 2004. In 2005, it was found that 78.3% of persons living with HIV/AIDS were from Montevideo, and 21.7% were found in the rest of the country.

From 1983 to 2006 a total of 6,463 cases of HIV-positive patients were registered, and 2,895 cases of AIDS (total number of accumulated cases) were registered. Of the persons with AIDS, 1,467 have died (mortality rate of 51%). As of June 2006 it is estimated Uruguay has 7,890 persons living with HIV or with AIDS, and that of those approximately 1,700 are on treatment. The rest, approximately 6,190 persons identified as living with HIV/AIDS, are not receiving treatment for different reasons: personal abandonment of indicated treatment, choice of alternative treatments (without antiretrovirals), or, in some cases, lack of in-

dications by the physician. However, according to the last sentinel study (2004), approximately 5,000 people living with HIV/AIDS have not been identified as such.

Of the total number of cases up to 2005, 67.0% of those HIV positive are male. The most affected are those between 15 and 44 years, with a maximum incidence in those 25 to 34 years. The male/female ratio dropped from 8.9 in 1989 to 2.2 in 2005.

In 1991 Uruguay passed a law that establishes that the provision of treatment is compulsory to all persons living with HIV/AIDS. In 1996 100% treatment coverage was achieved for all those living with HIV/AIDS requiring treatment as indicated by their physicians. Since 1997, all health centers are required by law to offer HIV testing to all pregnant women at their prenatal visits. In 1998, the National Consensus Commission was created to standardize treatment protocols. In 2002, the National Fund to Fight AIDS was created to finance antiretroviral treatment and corresponding paraclinical exams; the Fund is financed through a 3% tax on insurance policies, and taxes on the sale of football players to foreign teams.

Zoonoses

Uruguay was declared free of **foot-and-mouth-disease (FMD)** without vaccination in 1999. However, in 2000 the virus was reintroduced in the department of Rivera, and the pertinent recommendations of the World Organization for Animal Health (OIE) were implemented. In 2001, another reemergence of the disease occurred on the eastern coast, and since then bovine vaccination was reinitiated. A bivalent OA vaccination was chosen over a trivalent OAC vaccination, as there has been no trace of the virus in the Southern Cone for several years.

Very few cases of **brucellosis** (five cases in 2005) and **anthrax** (four cases in 2005) have been found in rural workers since 2000, as both zoonotic diseases are on the decline.

Leptospirosis is an occupational and epizootic disease found in specific areas dedicated to dairy farming and the cultivation of rice and sugar cane. Since 2002, there has been a greater awareness of the importance of this disease, leading to an increase in outbreak notifications. The outbreaks have been largely brought on by the floods and recent growth in the informal suburban settlements. In 2000, 23 cases were notified, while in 2002, 247 cases were notified (12).

Hydatidosis or cystic echinococcosis is a highly endemic parasitosis that, with intervention by the National Honorary Commission to Fight Hydatidosis, has been drastically reduced in terms of prevalence among children, real and operative incidence in men, and prevalence in canines (definite host), ovines, and bovines (intermediate hosts). In 1993, 367 cases were operated on nationwide (39.8% of them coming from Montevideo); and, in 2002, 139 patients were operated on (31.7% of them coming from Montevideo). On the basis of this national experience, the Southern Cone Subregional Project of Surveillance and Control of Hydatidosis was formed in 2004 (Argentina, Brazil, Chile, and

Uruguay), with the Technical Secretariat of the Pan American Health Organization (PAHO)/Pan American Foot and Mouth Disease Center (PANAFTOSA) and the Food and Agriculture Organization of the United Nations (FAO).

Prevention, surveillance, and control of zoonotic diseases and other illnesses transmitted by arthropods has been reorganized by law and the National Honorary Commission to Fight Hydatidosis was transformed into the National Commission of Zoonosis, in charge of handling these pathologies and responsible for the coordination of all programs in this area.

NONCOMMUNICABLE DISEASES

Metabolic and Nutritional Diseases

The major nutritional problems in Uruguay are **obesity** and **protein energy malnutrition**; the prevalence of **nutritional anemia** and **vitamin A deficiency** is unknown. A survey conducted in 2000 revealed that 51% of Uruguayans are **overweight** and 17% are obese (13). According to 2005 figures, the greatest proportion of obese children is found in those less than 1 year (7.8%), and malnutrition is highest among children age 1 (11.8%), measured by weight and height (14).

School-based censuses of children in the first grade in public schools (approximately 85% of the total child population attends public schools) reveal that 19.7%, 18.1%, and 22.9% of children had a height deficiency in 1987, 1990, and 2002, respectively. Data from 2002 suggest that the nutritional status of children has shown deterioration according to international standards (National Center for Health Statistics, CDC) since it was expected that the height deficiency that year would be 15.9% (2).

Cardiovascular Diseases

Diseases of the circulatory system have been the leading cause of death for nearly 50 years, accounting for 33.0% of all deaths in 2004. The mortality rate for these diseases was 330 per 100,000 population in 1999 and 328 per 100,000 in 2004.

The most common are **cerebrovascular diseases**, with a mortality rate of 114 per 100,000 population, and **ischemic diseases**, with a mortality rate of 86 per 100,000 population. Cerebrovascular diseases have a greater mortality rate among women than among men (128 vs. 98 per 100,000), while the opposite is true for ischemic disease, which is more frequent in men (101 and 72 per 100,000 population, respectively).

Malignant Neoplasms

Malignant neoplasms represented 23.5% of all deaths in Uruguay in 2004. A hospital-based morbidity study conducted in the first part of 2005 by the Ministry of Health among private health institutions found that tumors represented 9.6% of hospital discharges, with malignant tumors comprising 66% of the total. The rates of hospital discharge for this cause did not show a

significant difference between men and women (3.47 and 3.77 per 1,000 persons, respectively). More than 90% of the cases corresponded to persons aged 45 and older. In the general population, the most frequent types of tumors were, first, breast cancer, followed by cancer of the trachea, bronchus, and lung; and thirdly cancer of the colon. In men, cancer of the trachea, bronchus and lung predominated followed by cancer of the prostate and then cancer of the bladder, while among women, breast cancer led with 27% of the cases, followed by non-Hodgkins lymphoma and colon cancer. The average hospital stay for neoplasms is 10 days.

OTHER HEALTH PROBLEMS OR ISSUES

Mental Health

In 2005 the rate of mortality due to suicide was 20.6 per 100,000 population, and it was higher in men (77%) and in the interior of the country (70.9%). Of all persons treated in ambulatory mental health facilities in the country, 54% were women and 11% were children or adolescents. The average number of contacts per person is 3.3 per year. The most common diagnoses for admission to psychiatric hospitals were schizophrenia (44%) and changes in mood (20%).

Oral Health

Through decree by Executive Order, production and obligatory sale of fluoridated salts was initiated throughout the country in 1999. During that year, the last DMFT (decayed, missing, and filled teeth) survey among 12 year olds was taken, with an index of 2.47.

RESPONSE OF THE HEALTH SECTOR

Health Policies and Plans

The Constitution establishes that the State will legislate on all questions or issues related to health and public hygiene in order to achieve physical, moral, and social improvement of the Uruguayan population. The State will provide free preventive care and assistance only to indigents or those lacking sufficient resources. The Ministry of Public Health (MSP) was created in 1934 by Law No. 9.202, and is the organization responsible for establishing norms and regulating the sector, developing preventive programs, and administering their assistance services.

In order to respond to the increasing poverty that was identified particularly after 2002, the Ministry of Social Development (MIDES) was created by Law No. 17.866 (15) in March of 2005. One of its principal policies is the National Plan for Social Emergencies (PANES) that consists of monthly transfers of a sum of money by the State to those households that are below the poverty line and whose incomes per person do not surpass the amount for a basic basket of food (16). In return for the money, persons are requested to provide some compensation, such as carrying out community work, ensuring that their children at-

tend school, and that they care for their health. The program will be carried out for two years, followed by an evaluation to determine the results.

The Child, Adolescent and Family Program (Infamilia) (17), operating within the framework of the Ministry of Social Development, aims to improve the living conditions and social insertion of boys and girls and their families through specific policies, many of which are linked to health and poverty. The Program supports the promotion of integrated development and the growth of boys and girls from 0 to 4 years through the support of the Plan CAIF (Child and Family Care Centers), which provides care to 13,800 children throughout the country through 210 care centers. The Infamilia Program also works with the Ministry of Public Health to develop activities regarding sexual and reproductive health, including the accompanying of adolescent mothers and fathers during the first year following birth; the training of youth promoters; and the creation of specialized spaces for adolescent care. In 2005, more than 50 socio-educational agents accompanied more than 1,500 adolescent mothers and fathers, and training for health professionals in sexual and reproductive health was also conducted.

Health Strategies and Programs

In 2000 the Ministry of Public Health established a program to strengthen the Collective Health Care Institutions, with financing from the Inter-American Development Bank, which had a partial impact particularly on a group of private institutions located in Montevideo. The debt situation and other structural causes were the reason for the closure of many Collective Health Care Institutions, which declined in number from 50 in 2000 to 41 in 2005. Several institutions remain at risk, and the health authority has to play an active role in the evaluation of the fulfillment of their responsibilities as well as in control of their economic-financial management. Beginning in March 2005, the new government proposed that, given the critical situation of the sector, profound changes must be made to the models of health care, finance, and management. It hopes to achieve this through the construction of a National Integrated Health System and a National Insurance program to finance it. Therefore, a comprehensive strategy and inter-institutional coordination with other areas such as food, education, housing, and social security, among others, are considered absolutely necessary (18).

The health system is currently very fragmented and inequitable: the population covered by the public assistance services is largely younger, mostly female, and further below the income and education level than the population covered by the private sector. At the same time, the private sector has three times the amount of resources per beneficiary than the private sector. With the crisis in 2002, the utilization of the public sector has grown due to reduced employment opportunities, and those unemployed lost health coverage through social security. The

lack of a corresponding increase in the resources assigned to the public sector has resulted in a worsening of the inequities in quality and access.

Organization of the Health System

In March of 2005 the government proposed a global reform to the health sector (18), with a principal objective of contributing to equity in access to health services, through changes to the model of care and the application of a Primary Health Strategy, prioritizing the needs and rights of citizens through disease prevention, education, and health promotion, with an emphasis on active development of healthy behaviors and social participation. The reform also proposes changes to the management model, with an emphasis on democratization, transparency, efficacy, and efficiency to improve quality of care, as well as to the financing model, through the creation of a National Health Insurance program, proposing that resources be assigned and distributed to the health sector to meet the needs of the population. In the proposed insurance scheme, the users would contribute to the system based on family income and would obtain access to integrated coverage for health services. Public and private businesses would contribute an amount proportional to the number of employed workers. The institutions providing health services would receive income that would make it possible for them to achieve a reasonable balance between the number of enrollees and the cost of their care, based on the level of risk and expected expense for the population covered. This implies charging different costs through risk premiums based on sex, age, and other variables. The participating private health care institutions would follow the guidelines, norms, and controls that are defined as a condition for them to be financed by the insurance. The proposal includes a universal salary, regardless of where one works, as well as an overall cap on remunerations. The administration of the National Health Insurance program would be in the office of a Health Superintendent. The financial control and the quality of the core proposed services are the main components of the proposal.

In 2006 one of the first legal instruments designed by the Ministry of Public Health, and currently under discussion in the Parliament, was the Law of Administrative Decentralization of the State Health Services Administration, that separates the Administration from the structure of the Ministry of Public Health and converts it into an autonomous organization. The new organization would be directed by three delegates of the Executive Branch, a representative from the beneficiaries, and a representative from the workers of the State Health Services Administration. The purpose of this project is to complete the decentralization process begun in 1987 and to allow the Ministry of Public Health to concentrate on its steering role of the health sector.

The health system (19–22) has been historically characterized by a high level of fragmentation in the public and private sectors and by significant involvement of the private sector.

Various institutions make up the public sector providing health services. The network of the State Health Services Administration establishments is the largest in the country, and it includes hospitals, health centers, polyclinics, and family physicians. It provides coverage to the low-income population and is estimated to cover approximately 1,400,000 persons, approximately 40% of the total population. The State Health Services Administration provides 8,000 beds. The Armed Forces Health Services has its own hospital infrastructure in Montevideo with 450 beds and nursing services in the military units in the rest of the country. It provides coverage to approximately 165,000 people (active duty military, retirees, and their dependents). The Police Health Service has a hospital infrastructure of 132 beds in Montevideo, and in the interior of the country contracts services from the State Health Services Administration and private providers. It provides coverage to 70,000 (active duty police, retirees, and their dependents). The Scientific Hospital of the University of the Republic covers the same population as the State Health Services Administration and has 450 functioning beds. The Maternal-Child Service of the Social Welfare Bank has its own centers and provides coverage to couples and the children of beneficiaries of the Illness Insurance program who do not have private coverage. The State Insurance Fund provides direct care through its own 160-bed hospital in Montevideo and contracts services in the interior of the country. It covers occupational accidents and illness for the private sector. The Autonomous Entity Services and the Decentralized Services provide coverage to their workers, and in some cases, former employees and their families. The medical services of the 19 departments have varying levels of development, all providing primary health care and covering the low-income population.

The Collective Health Care Institutions are located in the private sector, with 41 medical centers with prepaid comprehensive services, 12 of which have their base in Montevideo and the rest in the interior of the country. It is a tightly regulated sector, and prices are subject to administrative control by the Ministry of Economics and Finance. Furthermore, the Ministry of Public Health determines which services it must provide and controls its aspects of care, as well as its economic and financial aspects. The majority of these organizations have their own inpatient services and their beneficiaries number 1,400,000. The institutions have between 3,000 and 240,000 affiliates. Private insurance plans are comprised of private businesses, largely commercial in nature, which provide care services through prepayment. This subsector includes institutions that provide total coverage (similar to the Collective Health Care Institutions), as well as partial. Starting in 2000, the State began to tighten its control over these organizations, particularly for those that are competition for the Ministry of Public Health. There are six companies which offer private insurance plans, including comprehensive coverage, and provide care to 55,000 subscribers. The mobile emergency systems are made up of a particular type of private

partial coverage insurance, which includes domiciliary ambulatory coverage in case of emergency. Most of the subscribers to these insurance plans have double coverage, and they complement their public or private comprehensive insurance plan with these services. The Institutes of Highly Specialized Medicine are also care-providing organizations, and they sell high-technology services. There are also a large number of private businesses, sanatoriums, and clinics that sell ambulatory services or inpatient care.

Public Health Services

On February 20, 2004, within the framework of strengthening the Epidemiological Surveillance of the Ministry of Public Health (Decree 64/004), the National Code on the Required Notification of Disease and Health Events was put into place, which includes a listing of notifiable diseases and events and the definition of a suspicious case, of a confirmed case, and the corresponding prevention and control methods. At the same time, the organization and functioning of the ministerial units in charge of communicable disease surveillance, chronic disease, environmental health, accidents, and nutrition were redesigned. In the area of maternal-child health, the Ministry of Public Health has required prevention activities in the polyclinics throughout the departments, and it also has incorporated, through the health reform process, measures to ensure greater equity, such as free prenatal care.

Also through this framework, the organization and functioning of the National Public Health Laboratory have been redesigned (Decrees 384/999 and 241/000). The goals include technical assistance and supervision of the National Network of Clinical Analysis Laboratories (public and private), epidemiological surveillance, the development of diagnostic norms and protocols, the quality control of reagents, procedures, and techniques, and outside evaluation. In March 2006 the Ministry of Public Health designed a National Contingency Plan for Pandemic Influenza (which includes avian influenza). The Ministry of Public Health is also working with other sectors, particularly with the Ministry of Livestock, Agriculture and Fisheries, to prevent avian influenza among producers.

The coverage of potable water services is 98% for the total population living in formal or regular settlements. A technical renovation and expansion of potable water service coverage continues to be developed, which was started during the 1990s by the Public Sanitation Office (official agency). The country continues to face the challenge of providing potable water coverage to the population residing in informal settlements around the outskirts of Montevideo, which represents 10.1% of the population of the capital. Sanitation services only reach approximately 80% of the population in the urban area of Montevideo, with more than 50% receiving services through the national sanitation network. In the urban interior of the country, 30% of the population receives services through the sanitation network, and approximately 50%

of the urban population in the interior of the country disposes of their own waste water (through septic tanks).

Traditionally, Uruguay has maintained a high level of food safety. The national responsibilities for food safety fall to the Ministry of Public Health, while the direct execution of food inoculation activities corresponds to the municipal authorities. Other actors in this area are the Technological Laboratory of Uruguay (LATU), the Ministry of Agriculture, Livestock and Fishery, consumer protection organizations, and the industrial and food services business associations. Several departments have their own comprehensive food safety programs as a strategy to protect health, production, and the local labor market. Work continues through the System for Epidemiological Surveillance of Food-Borne Disease, coordinated by the Ministry of Public Health at the national level. The municipal authorities conduct bromatological controls and the Consumer Defense Area (ADECO) of the Ministry of Economy is responsible for product quality control, among other duties.

Individual Care Services

Blood donation in Uruguay is voluntary according to national norms. Some 35,000 Uruguayans receive transfusions every year. Eighty-seven blood banks exist in Uruguay: 45 public and 42 in the private sector. One hundred percent of blood is screened for the following diseases: syphilis, viral hepatitis B (superficial antigen and “anticore” antibody), viral hepatitis C, HIV (anti HTLV-1 and 2), and Chagas’ disease. Based on the pre-donation questionnaire, 17% of would-be donors are rejected, and 4.7% of blood samples are discarded after screening (23).

Health Promotion

As a way to address community health, the Ministry of Public Health has begun a “productive and health communities” strategy in certain at-risk rural and suburban areas, with the goal of including comprehensive health activities in the development of production and local work. It has supported cooperative projects and small and mid-sized community businesses, based on the production of foodstuffs, artisan goods, and other local/regional products. The Ministry of Public Health and the Ministry of Agriculture, Livestock and Fishery programs have played an active role in these activities.

Uruguay ratified the Framework Convention on Tobacco Control. In 2006 the country enacted a national law that made all public spaces, workplaces, bars and restaurants smoke-free and made Uruguay a pioneer in the Region in the battle against tobacco.

Health Supplies

A broad legal framework exists to regulate the importation, production, distribution, sales, and propaganda of pharmaceuti-

als. The Ministry of Public Health controls the requirements to authorize the sanitary registration of pharmaceuticals considered necessary, efficacious, safe, and under conditions that guarantee quality and compliance with the norms of the production laboratories. The Ministry of Public Health depends on the evaluation and registry units; inspection of manufacturers, importers, distributors, and places of sale and usage; and on laboratory analysis to control the quality of medications.

The control includes all areas of production (licensure of manufacturer, sanitary registration of products, and good manufacturing practices) and of distribution (outfitting and inspection of establishments and compliance with best practices).

Norms require an obligatory common *vade mecum* (reference book) for all the Collective Health Care Institutions, and a separate one exists for all the public services. Some of the goals defined by the new administration since 2005 include: approve the Law of Generic Drugs; provide guaranteed access and availability to medications as soon as they are approved for the Sole Therapeutic Drug Formulary for the entire health system; strengthen drug surveillance; stimulate national production through competition and with adequate quality controls; and promote the rational use of drugs.

Decree 165/99 establishes that the manufacturing, registration, importation, commercialization, use, and control of diagnostic reagents, medical equipment, and therapeutic devices are the exclusive domain of the Department of Medical Technology, of the Division of Health Products, belonging to the General Directorate of Health of the Ministry of Public Health. The Ministry of Industry and Energy, through the Directorate of Nuclear Technology, has responsibility for all equipment that emits ionizing radiation. Since 2004 it has coordinated with the Department of Medical Technology on the registration of this type of equipment (Decree 43/004).

In 2004 the first National Census of Medical Equipment was completed with the objective of undertaking a diagnostic review of the medical equipment being used throughout the country, with the goal of planning for the rational introduction of new technologies. It should be noted that a high percentage of equipment is obsolete or in very precarious maintenance condition, which has resulted in the regulation of maintenance services for medical equipment.

Through the framework of implementing the Comprehensive National Health System since 2005, the government considered it necessary to create an Information System on Medical Technology, with the goal of systematically gathering information on the habilitation, organization, functioning, and use of medical equipment.

With regard to the functioning of manufacturing companies and importers of medical products, Good Manufacturing Practice Inspections were begun, as required by MERCOSUR norm 4/95, and the goal is to require this certification for all national companies.

Human Resources

Medical doctors must be professional university graduates with a diploma granted by an officially recognized institution, must register with the Ministry of Public Health to practice as a professional, and must register with the Retirement and Pension Office for University Professionals. For foreign professionals to be able to practice in Uruguay they must have an authorized diploma from a university or institution recognized by the Ministry of Education and Culture.

As of December 31, 2005, Uruguay had 13,390 physicians (41.3 per 10,000 population). The supply of physicians is characteristically a specialized workforce in which, on average, every professional holds more than two jobs (24). In terms of the workforce overview, a study has confirmed (25) that medical work is spread among a relatively important number of sources of employment. The average number of jobs is higher than two jobs per professional, but it varies depending on how many years the professional has been working as a medical doctor and the concentration of work in the private sector. Human resources in health are shown in Table 1.

The system for human resources training, from the point of view of the programs and based on the number of graduated professionals and technicians, does not take into consideration the health needs of the population based on demographic and epidemiological parameters when planning. Similarly, the identification of human resources for the sector also has not been a priority area for action on the part of health authorities. In 2005, the implementation of an information system on available health resources in the public and private health services was begun, including data on the quantity and type of positions, level of care where they work, and remunerations and quantity of medical interventions, which demonstrate advancement in the characterization of such resources.

Furthermore, the Ministry of Public Health and the School of Medicine are developing other joint activities with an agenda linked to the Medical Residency Programs and other areas related to human resources.

TABLE 1. Health professionals in Uruguay.

Profession	Total number	Ratio per 10,000 population
Physicians	13,390	41.3
Dentists	4,308	13.3
Licensed nurses	3,543	10.9
Pharmacists	1,476	4.6
Midwives	579	1.8

Source: Calculated with data from the Retirement and Pension Office for University Professionals.

Health Sector Expenditures and Financing

Studies have shown a trend in health expenditures increasing from 1994 until 2000, and decreasing from 2000 until 2004. The relationship between health expenditure and gross domestic product (GDP) can be seen in Table 2.

As shown in Table 3, the resources for the health sector come from both the public and private sectors. The public sector spends approximately US\$ 12 per person per month, while the private sector spends US\$ 32 per person per month. Although the coverage of care is almost evenly split between the public and private sectors, there is a large and historical difference in expenditures between the two sectors.

Public financing is comprised largely of taxes, contributions to social security, and tariffs for services on some companies. National and municipal taxes exist that finance health expenditures, and the General Budget for Expenses and Investment is the instrument by which the resources are assigned to the public agencies on the national level. The resources available for the Ministry of Public Health correspond largely to the budget of the State Health Services Administration. The municipal taxes are collected by the departmental governments, which, in function of their own budgetary assignments, contribute to the system to finance the provision of health services to the population of the department, as well as to finance the coverage of their own employees. According to the 1975 Law 14.407, the employees and employers in a private activity should contribute 3% and 5%, respectively, to the Illness Insurance program of the Social Welfare Bank. The law also provides for the possibility of not contributing the aforementioned support to the Health Insurance program, given that the employer and the employees agree that the support for coverage will be financed through other insurance plans. According to the 1995 Law 16.713, the right to coverage through the Illness Insurance program is given to those pensioners below a certain predetermined income level; those who opt for this arrangement contribute 3% of their pension. Teachers and judicial employees in the public sector have obtained the right to supported coverage through the Social Welfare Bank. This coverage, as well as the deficit of the actively employed and those retired, is financed through the transferences from the Central Government to social security.

Some of the public agencies (the National Administration of Combustibles, Alcohol, and Cement; and three banks (Banco República, Banco Hipotecario, and Banco de Seguros) finance the health coverage of their employees, and those funds come from the fees charged for their services. Private financing is largely comprised of out-of-pocket expenses by those persons who have voluntary or private providers.

The sources of financing of the health system are made up of organizations that have the securing and administering of funds for the purchase of services (such as the Illness Insurance program of the BPS) as their specific function, as well as other organizations whose principal function is the provision of services.

TABLE 2. Trends in health expenditures, Uruguay, 1994–2004.

Year	Population (thousands)	Health expenditures (millions US\$)	GDP (millions US\$)	Expenditure in health as a percentage of GDP (%)	Per capita expenditure in health (US\$)
1994	3,195	1,590	17,518	9.1	498
1995	3,218	1,781	19,318	9.2	553
1997	3,265	2,163	21,695	10.0	662
1998	3,289	2,292	22,371	10.2	697
1999	3,303	2,238	20,912	10.7	678
2000	3,322	2,182	20,042	10.9	657
2004	3,241	1,184	13,215	9.0	365

Source: Cuentas Nacionales en Salud 2004 y Cuentas de Gasto y Financiamiento, 1990–2000.

TABLE 3. Sources of health financing, Uruguay, 2000 and 2004.

Sources of financing	2000 (%)	2004 (%)
General taxes	21.9	20.2
Local taxes	0.3	1.7
Parastatal and public corporations	2.3	2.3
Social security		
Employer contributions	9.6	11.9
Contributions of the employee/pensioner	4.6	5.8
Transfers of the government to social security	3.3	7.7
Health expenditures with private financing	53.4	49.6
Health expenditures financed externally	0.0	0.0
Debt	4.5	0.8
General total	100.0%	100.0%
(millions of US\$)	(2,182)	(1,184)

Beginning with the social security contributions and the transfers of the government the comprehensive care for approximately 600,000 workers and retired people are financed and covered, which form part of the care providers of the private sector.

The National Fund of Resources, a non-State public institution whose objective is to finance a group of high-cost, low-frequency providers, is also an institutional agent of financing. Its funds are derived largely from the payment of the Illness Insurance program of the Social Welfare Bank, by the actively employed and pensioners who are covered; out-of-pocket payments from all persons voluntarily affiliated with a Collective Health Care Institution; payment for services from the General Revenue for the coverage of those receiving services from the State Health Services Administration; and specific taxes. The National Fund of Resources contracts public and private providers (named by the Institutes of Highly Specialized Medicine) for the coverage of high-technology care. Other organizations such as the State Health Services Administration, the Military Health System of the National Ministry of Defense, the Police Health System of the Ministry of the Interior, the Municipal Intendancies, and the

State Insurance Fund, are financial agents that also receive funds through public financing and provide care.

At the private level the Collective Health Care Institutions and the private health insurance plans fulfill a double role as financing agent and provider of services.

Technical Cooperation and External Financing

The majority of the projects begun in the 1990s financed by the World Bank were completed by the end of 2000. The Strengthening Project of the Collective Health Care Institutions, developed during that same year, was funded by the Inter-American Development Bank (IDB).

Beginning in 2005, new lines of support from the World Bank began, largely linked to the social area, including the reform of the health sector. The technical cooperation of the Pan American Health Organization (PAHO)/World Health Organization (WHO) continues working to comply with the resolutions of the Governing Bodies and the national and departmental health authorities. From December 2000 to July 2006, the Ministry of Public Health,

Response to Deepening Poverty

In 2002 Uruguay suffered a severe economic crisis with a decline in employment and serious consequences for the financial system. The increase in unemployment and the debt in dollars of the urban and rural population have made poverty more acute. In 1999, 15.3% of the population lived below the poverty line, with the figure rising to 32.1% by 2004, concentrated largely among children (56.5% of boys and girls between 0 and 5 years lived below the poverty line in 2004).

As a response, the Ministry of Social Development (MIDES) was created in March 2005. One of its main policies is the National Plan for Social Emergencies (PANES) that consists of monthly government cash transfers to households below the poverty line whose per capita incomes do not exceed the cost of a basic basket of food. The cash transfers are contingent on the beneficiaries performing community work, and ensuring that their children attend school and go for medical checkups. The program will last for two years, followed by an evaluation of the results. MIDES also operates the Child, Adolescent and Family Program (Infamilia), which aims to improve the living conditions and social integration of children and their families through specific policies, several of which are linked to health and poverty. The Program supports the promotion of comprehensive development and growth among boys and girls from 0 to 4 years and, together with the Ministry of Health, it carries out actions for sexual and reproductive education, including support for teenage parents for the first year following the birth of a child, training for youth promoters, and the creation of specialized spaces to assist adolescents.

with support from PAHO and financing from the IDB, developed a project on oral health that included a cost-effectiveness study on the technique or practice of the atraumatic restoration (PRAT). This research is simultaneously being conducted in other countries in the Region. As a consequence of the research, the Ministry of Public Health and the Intendancy of Canelones signed a framework agreement of complementary work, known as the Departmental Health Plan. One of its lines of work in primary health care includes oral health.

In 2004, the Memorandum of Understanding between the governments of Uruguay and Italy was approved by law for a credit of 15 million Euros to acquire new equipment for the public health sector. This represents the largest investment in health of the current administration.

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