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# COSTA RICA

## GENERAL SITUATION AND TRENDS

### Socioeconomic, Political, and Demographic Overview

Costa Rica has an area of 51,100 km<sup>2</sup> and a population of 3.36 million inhabitants (1995). It is divided into seven administrative provinces and 81 cantons and, for planning purposes, nine regions. The country has enjoyed sustained economic growth and political stability, and has had no army for 49 years. These factors have enabled Costa Rica to make significant social progress.

The economic crisis of the 1980s made it necessary to re-design the development model, which focuses on promoting exports and tourism and modernizing state institutions in the 1990s. In 1994, the per capita gross domestic product (GDP) was US\$ 2,150, rising by 4.7% in 1995. At the end of 1995, the public foreign debt was US\$ 3,255 million. Servicing the debt as a percentage of GDP fell slightly with respect to the previous decade. In 1995, the foreign debt was equal to 37.5% of GDP, a much lower figure than the average from the previous decade (67%), which reduces the vulnerability of the economy to foreign indebtedness.

The country's domestic debt doubled in the period 1992–1995 to 38.5% of the GDP in 1995. The domestic debt equaled 40% of the foreign debt in 1992 and 82% in 1995. This situation has brought changes in the operation of the State and has led to cutbacks in public spending. The fiscal deficit, which was 7% of GDP in 1994, fell to 5% in 1995. Despite these policies, the State increased social investment in education, health, and social welfare by between 4.5% and 8%.

It is estimated that 14.7% of households in 1995 lived in poverty, without sufficient income to cover the cost of a basic basket of food and nonfood products. In 1989, that proportion was 21.9%. Approximately 80% of poor households are located in rural areas. The Brunca and Chorotega regions are the poorest, with 36% and 33% poverty, respectively. The State has a national plan to combat poverty and protection

mechanisms for the poor (access to goods and services, subsidies, housing, etc.), and it has identified 16 areas of extreme poverty, which are receiving priority attention.

The economically active population (EAP) in 1995 numbered 1.22 million, of whom 3.8% had no education and 13.7% had a university education. Women make up 30% of the EAP and young people between the ages of 12 and 19, 13%; in the population aged 5 to 17, 13% work, but 34% of that group does not receive any remuneration for their work. Open unemployment reached 5.2% in 1995, affecting most significantly those with the least education, young people, and the elderly. Among the poor, 10.9% to 12.5% live in extreme poverty and 36% of the openly unemployed are women. According to the results of the 1995 household survey, the poorest quintile of families (20%) receives 5.5% of the country's total income, whereas the richest quintile receives roughly 49.1%.

The Costa Rican economy has always been dependent on the use of natural resources. During the 1980s, the GDP fell roughly 1.5% annually as a result of deforestation, soil erosion, and the unsustainable development of the gulf of Nicoya. There was no clear policy for managing natural resources. Costa Rica has roughly 6% of the world's biodiversity, and 25% of its territory consists of protected areas. It currently has a conservation strategy for sustainable development to deal with serious environmental problems: water and air pollution, primarily in the San José metropolitan area; solid waste effluents; and erosion and destruction of the forest reserve (which covered 56% of the country in 1960 but only 32% in 1990). In the past decade, Costa Rica has had the highest pesticide consumption in Central America—roughly 4 kg per inhabitant per year, which is some 6 to 10 times the world average.

In 1991, the national dietary caloric availability was 2,261 kcal per person and it was higher in rural (2,355 kcal) than in urban (2,170 kcal) areas; 56% of all calories come from rice, fats, oils, and sugars. Rice and beans, which are the mainstay of the Costa Rican diet, provide 30% of the calories and 34% of the protein consumed.

At the end of 1995, 99.6% of the population had access to water suitable for human consumption, 95.7% had a sewerage system or a system for sanitary disposal of excreta, and 93% had electricity (83% of which was generated by hydroelectric plants).

Education is free and compulsory through the ninth grade, and the illiteracy rate is 7%. In 1994, illiteracy in persons over 13 was estimated at 8.8% in rural areas and 3.6% in urban areas. School enrollment rates are very high, and the dropout rate in cycles I and II was 4.2% in 1994 and 5% in 1995; the number from the latter year is the highest in recent decades. The dropout rate in middle school also increased in 1995 (16.1%) compared with 1994 (14.6%), and it was triple the primary school dropout rate. In 1994, public schools in marginal urban areas had a dropout rate eight times higher than the national average.

The housing shortage is a problem—in 1994 it was estimated at 160,000 units; 75% of urban dwellings and 60% of rural ones are considered to be in good condition; 91% of urban dwellings have basic services, compared with 81% of rural dwellings.

The last national census was conducted in 1984. According to estimates from the Department of Statistics and Censuses, the population density in 1995 was 65.8 inhabitants per km<sup>2</sup>. The annual growth rate fell from 3.0% in 1992 to 2.2% in 1995. Slightly over one-third of the population (34.4%) are children under 15, and 4.7% are over 65. Women make up 49% of the population, and 56.3% of the country's inhabitants live in rural areas.

In 1996, international immigration was just under a quarter of a million people—51% from Nicaragua and 66% from other Central American countries. The number of temporary and permanent undocumented immigrants is difficult to quantify. These immigrants do not always have access to the social benefits that are available to citizens, and their standard of living is, therefore, usually lower than that of the rest of the population.

Life expectancy at birth in the period 1990–1995 was 75.2 years and it is estimated at 75.6 for the period 1995–2000 (78.1 in women, 73.3 in men). The total fertility rate was 3.3 children per woman between 1985 and 1990 and 3.1 in 1990–1995. The crude birth rate was 25.4 per 1,000 population in 1992 and 23.9 per 1,000 in 1995. Roughly 80,000 births have been registered annually in the 1990s, with a male-to-female ratio of 1.02.

### Mortality Profile

The total death rate was 3.8 per 1,000 population in 1992 and 4.2 per 1,000 in 1995. Of the 13,278 deaths registered in 1994, 62.9% were persons aged 60 and over, 57.2% of whom

were men. The causes of death have not changed considerably in recent years. The five leading causes are chronic diseases and unintentional injuries (“accidents”). Only 2.1% of deaths were attributed to ill-defined causes.

The leading cause of death was cardiovascular disease, with a rate of 10.5 per 10,000 population in 1990, 12.6 in 1994, and 12.4 in 1995. Ischemic heart disease was responsible for 47.2% of those deaths. The second leading cause of death was neoplasms, with a rate of 7.5 per 10,000 in 1990, 8.1 in 1994, and 8.4 in 1995. In 1994, stomach cancer ranked first among neoplasms for both sexes, with prostate cancer ranking second for men and breast and cervical cancer in second and third place for women. External causes occupied third place as a cause of mortality, with respective rates of 4.4, 4.9, and 5.0 per 10,000 population in 1990, 1994, and 1995. This group of causes is responsible for the most years of potential life lost (YPLL), with 21.8% of all YPLL in 1994. Diseases of the respiratory system ranked fourth as a cause of death in 1995, with a rate of 4.6 per 10,000. Diseases of the digestive system ranked fifth, with a rate of 2.7 per 10,000.

The infant mortality rate was 15.3 per 1,000 live births in 1990 and 13.0 per 1,000 in 1994. In seven cantons, infant mortality exceeded 20 per 1,000 and eight cantons had a rate of 15 to 20 per 1,000. In 1994, 69% of deaths in children under 1 year of age (8.9 per 1,000) occurred during the neonatal period. Disorders originating in the perinatal period are the leading cause of infant mortality, with a rate of 6.4 per 1,000, followed by congenital anomalies, at 3.6 per 1,000.

Maternal mortality was low, ranging from 15 to 39 per 100,000 live births between 1990 and 1994. Among its causes, eclampsia ranked first.

### Morbidity Profile

The Costa Rican Social Security Fund (CCSS) regularly surveys the reasons for outpatient consultation. The last survey was in 1992, when there were 6.13 million consultations and an annual average of 1.94 consultations per inhabitant; 64.6% of the consultations were by women. Respiratory diseases ranked first as a reason for consultation, followed by hypertension. In the 20- to 44-year age group, the leading cause was respiratory diseases, followed by back problems in men and gynecological disorders in women. Women received twice as many checkups (without any clear disorder) as men.

According to a sample of three hospitals, one of which is a national hospital, in 1995 respiratory diseases, injuries, childbirth, and asthma were the most frequent reasons for visits to emergency services.

The CCSS recorded 297,941 hospital discharges in 1994; 68.4% of those were women. The importance of gynecological and obstetric problems as a reason for hospitalization is

evident in that 84% of the discharges in the 15- to 44-year age group were women; in children under 15, 57% of discharges were boys and in older adults there were similar proportions of men and women. One-tenth of discharges were for emergencies, which heavily burdened the services and involved terminal care.

In general, the number of discharges has remained stable since 1991. In 1994, the most frequent diagnoses at discharge were gynecological and obstetric causes, perineal trauma, intestinal infections, asthma, and hernias. In children, the leading causes were acute intestinal infections, asthma, chronic tonsillitis, and acute appendicitis. In adults 45 and over, hospitalizations for diabetes mellitus, inguinal hernias, prostate hyperplasia, and ischemic heart disease predominated.

## SPECIFIC HEALTH PROBLEMS

### Analysis by Population Group

#### *Health of Preschool Children (Children under 5)*

In 1995, it was estimated that there were nearly 400,000 children under the age of 5, or 11.9% of the total population; 80,306 live births and 1,064 deaths in children under 1 year were registered that year, with an infant mortality rate of 13.3 per 1,000 and a neonatal mortality rate of 8.5 per 1,000 live births. Disorders originating in the perinatal period were the leading cause of death in children under 1, with a rate of 6.5 per 1,000, followed by congenital anomalies, at 3.7 per 1,000, and lung diseases, at 1.3 per 1,000. Infectious and parasitic diseases were responsible for a mere 4.4% of infant mortality, with a rate of 0.6 per 1,000.

In 1994, the CCSS registered 25,772 hospital discharges of children under 1 (8.7% of all discharges), of which boys constituted 56.2%. The leading causes of hospitalization recorded at the time of discharge were healthy newborns, jaundice, intestinal infections, and acute respiratory infections. In 1992, there were 242,641 consultations by children under 1 at the CCSS, which is 4% of all consultations for that year; 15% of the consultations were for checkups, with no pathological cause.

In 1995, the deaths registered in the group between 1 and 4 years of age corresponded to 1.3% of all deaths, with a mortality rate of 5.9 per 10,000. Congenital anomalies were the leading cause of death in this group, followed closely by infectious and parasitic diseases and diseases of the respiratory system.

The population aged 1 to 4 received 610,783 consultations, or 10% of the total. That number is almost evenly distributed between boys and girls: 7% were checkups; 16,801 hospital discharges were registered, or 5.6% of the total, and 41% of those discharged were girls. In this age group, the leading

causes of hospitalization recorded at discharge were intestinal infection, asthma, bronchopneumonia, and inguinal hernias.

National studies indicate that children under 5 in urban areas have an average of 3 bouts of acute respiratory infection per year; in rural areas the number climbs to an average of 5 to 8.

#### *Health of Schoolchildren and Adolescents*

In 1995, 11.7% of the population was between 5 and 9 years of age; 10.9% was between 10 and 14; and 9.8% was between 15 and 19. The 5-to-14 age group accounted for 1.6% of all mortality in the country and had the lowest specific rate of mortality: 3 per 10,000. The leading causes of death were external causes—injuries and poisonings—followed by neoplasms and diseases of the nervous system.

In children between 5 and 9, 493,213 consultations were registered, and the leading reason for consultation was respiratory problems. The 10-to-14 age group accounted for 292,737 consultations, or 4.8% of the total, and the leading reasons for consultation were acute upper respiratory infections, followed by mental disorders in males and dermatoses in females; roughly 6% of the consultations in this group were checkups. In the 15-to-19 age group, 320,768 consultations were registered, or 5.2% of the total; 75.4% were women. The leading reasons for consultation in adolescents were related to menstruation, acute disorders of the upper respiratory system, gastroduodenitis, and obstetric complications; 15.7% of consultations in women were checkups, without a clear pathological disorder. In men in this group, the leading cause of consultation was acute disorders of the upper respiratory system; 5.9% were checkups.

The group between 5 and 9 years was responsible for 4.4% of all hospital discharges; 59.9% were boys, for whom asthma was the leading cause of hospitalization, followed by chronic tonsillitis, which was also the leading cause in girls, followed by asthma.

In the population between 10 and 14 years of age, 9,176 discharges were recorded, or 3.1% of all discharges; 54.5% were males, in whom the leading causes of hospitalization were acute appendicitis, chronic tonsillitis, congenital anomalies, concussions, and asthma. In females, the leading cause of hospitalization was also acute appendicitis (8.7% of discharges) followed by normal deliveries (5.5%), chronic tonsillitis, premature deliveries, and asthma. Obstructed labor was the seventh leading cause of hospitalization in this group; unspecified complications of abortion was tenth.

In the population between 15 and 19 years of age, 25,184 hospital discharges were registered, or 8.8% of the total; 84.7% of these discharges were women, in whom the most frequent reasons for hospitalization were gynecological and

obstetric causes—normal (33%), premature (11%), or dystocia (6%) deliveries; unspecified complications of abortion (5%); and others (4%).

The mortality data for the group aged 15 to 19 are not broken down and are therefore presented in the description of mortality in the adult population.

### *Health of Adults*

In 1995, the population between 20 and 59 years old was estimated at 1.64 million, or 48.8% of the total population. The population 60 years and over was estimated at 233,000, or 6.9% of the total population, made up of 109,000 men and 124,000 women.

The leading causes of death in the group between 15 and 34 years old were external causes—injuries and poisonings—followed by neoplasms. In women the third leading cause of death was cardiovascular disease, and in men it was endocrine and metabolic diseases and immunological disorders.

In the 35-to-49 age group, the leading causes of death in women were neoplasms, followed by cardiovascular disease and external causes. In men, external causes ranked first and cardiovascular disease was second.

In the group aged 50 to 69 years, the leading causes of death in women were neoplasms, cardiovascular and blood diseases, and diseases of the hematopoietic organs. In men between 50 and 69, the predominant causes of death were cardiovascular disease, endocrine and metabolic diseases, immunological disorders, and external causes.

In the group aged 70 and over, mortality was 644 per 10,000 in women and 850 per 10,000 in men. The leading causes of death in both sexes were cardiovascular diseases, neoplasms, and diseases of the respiratory system.

In 1992, 3.27 million consultations of persons between the ages of 20 and 59 were registered, or 53% of the total, with an average of two consultations per inhabitant.

In the 20-to-44 age group, 73% of all consultations were by women, 15.6% of which were for checkups. The leading causes of consultation were inflammatory diseases of the uterus, vagina, and vulva, followed by acute upper respiratory infections and direct obstetric complications. In men between 20 and 44, checkups accounted for 4.7% of the total, and the leading causes of consultation were acute upper respiratory infections and upper and lower back problems.

In the group between 45 and 59 years of age, still according to the 1992 data, there were roughly 870,000 consultations, or 14.2% of the total, 69.8% of which were by women. The leading cause of consultation was hypertension, followed by diabetes in women and upper and lower back problems in men; the third leading cause was joint disorders in women and diabetes in men. Approximately 4.5% of the total were checkups

without a pathological cause; that proportion was somewhat higher (4.9%) in women.

The group 60 years and over accounted for 14.2% of all outpatient consultations at the CCSS (869,000). This group averaged 3.7 consultations per person per year, and women accounted for 61.4% of the consultations. Hypertension was the top reason for consultation, followed by diabetes mellitus and joint disorders.

According to available data on hospital discharges, 48.1% of the total in 1994 were discharges of persons between 20 and 44 years of age. Of the 143,000 discharges in this group, 83.9% were of women, in whom the 10 leading causes of hospitalization were related to reproduction. Normal deliveries were responsible for 21.5% of the discharges, obstructed labor for 8.0%, and premature deliveries for 7.3%. In men, the leading causes of hospitalization were acute appendicitis and inguinal hernias, which combined account for less than 10% of all discharges. This illustrates the wide variety of causes of hospitalization for this subgroup.

In the group between 45 and 59 years of age, there were 25,000 discharges, or 7.1 per 100 persons in this group. They accounted for 8.3% of all discharges; 59.3% of those discharged of women, in whom menstrual disorders were the leading cause of hospitalization (5.6%), followed by cholelithiasis (4.9%) and diabetes mellitus (4.5%). In men in this group, diabetes mellitus, inguinal hernias, and ischemic heart disease were the three leading causes of hospitalization, accounting for 4.7%, 4.0%, and 3.1% of all discharges, respectively.

In the group 60 and over, the CCSS registered 38,410 discharges, or 4.4 per 100 persons in this group and 12.9% of all discharges. Slightly over half (51%) were men, in whom the leading causes of hospitalization were prostate hyperplasia (7.2%), ischemic heart disease (5.7%), cataracts (4.6%), and chronic obstructive pulmonary disease (4.5%). In women, the leading causes of hospitalization were diabetes mellitus (7.8%), cataracts (5.6%), chronic obstructive pulmonary disease (4.8%), ischemic heart disease, and fractures of the neck of the femur (3.4%).

According to the 1993 reproductive health survey, 75% of sexually active women use contraception. Of these, 28% use modern methods, 21% have been sterilized, 16% use barrier methods, and 10% use traditional methods. With regard to pregnant women, 75% begin prenatal checkups during the first trimester and 97% of deliveries are in hospitals; 56% of deliveries are attended by physicians and 41% are attended by nurses.

### *Workers' Health*

It is estimated that occupational health services coverage is low—around 25% for salaried workers and practically zero in

the informal sector, which represents approximately 30% of the working population. Agricultural workers—especially those in banana, melon, and rice production—are at high risk of exposure to pesticides. This trend is on the rise, although this may be due in part to decreased underregistration, which was estimated at 43% that same year. Some studies indicate that the risk of accidents for female agricultural workers is 1.7 times higher than for male workers. In 1995, 978 cases of acute pesticide poisoning were registered.

### *Health of Indigenous People*

The indigenous population represents 1% of the country's population and is distributed among eight groups (the Brunecas or Borucas, Cabecars, Teribes or Terrabas, Bribris, Huetars, Malekus or Guatusos, Chorotegas, and Guayamis) totaling 35,850 persons. The Talamanca, Buenos Aires, and Guatuso cantons, where these people live, have high rates of infant mortality, birth, and total mortality compared with the national average. They also have major shortages of housing and basic services, such as drinking water and electricity. In 1995, steps were taken to diminish the social marginalization of these groups, extending social security and establishing the Department of Indigenous Education and the Technical College in the primarily indigenous Amubri de Talamanca community.

### **Analysis by Type of Disease or Health Impairment**

#### *Communicable Diseases*

Infectious and parasitic diseases were responsible for some 2.4% to 2.7% of all deaths registered between 1992 and 1995, with an annual mortality rate of 0.9 to 1.1 per 10,000 population. They do not generate a large volume of outpatient services; acute intestinal and respiratory infections are a major cause of hospitalization only in children under 5. However, in recent years, several communicable diseases have re-emerged.

**Vector-Borne Diseases.** Malaria has flared up since the late 1980s, registering 6,951 cases in 1992, with an annual parasite index (API) of 7.9 per 1,000 population. Since 1991, malaria has shifted from the Pacific coast to the northern region and the Atlantic coast, coinciding with the development of the banana industry, deforestation, and migratory movements of temporary workers, which are factors that hinder case follow-up and control. The risk of contracting malaria in the Huetar Atlántica region is triple that in the rest of the country. There were 4,515 cases registered in 1995 and 5,480 in 1996, with an API of 4.8 per 1,000. *Plasmodium vivax* was

the infectious agent in 99.9% of the cases up through 1995. Infections caused by *Plasmodium falciparum* are imported cases (in 1996, 65 cases were recorded). In Costa Rica, no deaths from malaria had been registered in over 20 years; however in 1996 two deaths from cases caused by *P. falciparum* were recorded.

Since 1992 the *Aedes aegypti* mosquito has been detected in localities where it had never previously been found, such as the Meseta Central, at altitudes over 700 m above sea level, including the San José metropolitan area. In 1994, rates of infestation of up to 32.2% were detected in the south central region. The most frequent reservoirs are tires and, in the summer, water storage containers.

In late 1993 there was a sudden dengue outbreak, with 4,612 cases; 13,929 cases were reported in 1994 and 5,135 in 1995, including the first case of dengue hemorrhagic fever in the Chorotega region. In 1996, 2,309 cases and the first two deaths from dengue were registered. The circulating serotype that started the epidemic was serotype 1. Two cases of serotypes 2 and 4 were detected, which subsequently were not isolated again. In 1995, serotype 3 was detected in several regions of the country; in 1996 its presence increased, coinciding with the number of case fatalities. The majority of cases were in areas with high population density, in the 20- to 40-year age group, and in women (42% of the cases were in persons working in domestic occupations, and 17% were in students).

**Vaccine-Preventable Diseases.** A measles epidemic that began in late 1990 in Guanacaste subsequently spread to the rest of the country and did not subside until December 1993. In that period, 9,292 cases and 56 deaths were registered. Many cases were in adolescents and young adults; however, the incidence and case-fatality rates were higher in children under 1 year of age. In 1994, 103 cases and no deaths were registered; in 1995, 250 cases were reported, 86% of which were ruled out as measles. In 1996, 148 cases were reported, 84% of which were ruled out.

In the period 1992–1996, rubella exhibited a downward trend. Laboratory confirmation has been available since 1995. That year 67 cases were confirmed—7 in the laboratory and 60 clinically. In 1996, 37 cases were confirmed—15 in the laboratory. During these years, there were no cases of congenital rubella syndrome.

Since 1973, no cases of poliomyelitis have been registered, and eradication of the circulation of wild poliovirus was confirmed in 1994. In the period 1990–1995, there were no known cases of diphtheria, and the last case of neonatal tetanus was reported in 1988. The incidence of whooping cough has been low since 1991, with a downward trend, dropping from 1.1 per 100,000 population in 1992 to 0.2 per 100,000 in 1996, with only one death, in 1995, in the entire period.

**Cholera.** Cholera was detected in Costa Rica in January 1992. That year 12 cases were reported. In 1996, 36 cases were recorded, 19 of which were imported. As of 1996, 123 cases had been reported, 74% of which were imported. That year multiple antimicrobial resistance of *Vibrio cholerae* in all the isolates was detected, as was the first death from cholera. The most affected area was the northern border. In 1992, the predominant biotype was El Tor, Inaba serotype; the Ogawa serotype was predominant in later years.

**Chronic Communicable Diseases.** Tuberculosis has shown a dramatic increase recently, with incidence rates of 11.4 per 100,000 in 1992 and 19.0 per 100,000 in 1996. Despite this overall increase, the incidence of tuberculous meningitis in children under 5 is stable and low. The Pacific Central (Puntarenas) and Huetar Atlántica (Limón) regions are the areas most affected by this disease. Twice as many cases are diagnosed in men as in women. Roughly 90% of cases are pulmonary tuberculosis. In 1994, 80 deaths from tuberculosis were registered, representing 25% of all deaths from infectious and parasitic diseases that year. In 1995, the national mortality rate from tuberculosis was 2.1 per 100,000; in Limón it reached 7.0 per 100,000. The country does not have a registry of tuberculosis patients by cohort; therefore data on the effectiveness of treatment or the efficiency of the program are not available. Furthermore, there are no data on the link between tuberculosis and HIV.

Leprosy is no longer a public health problem. In late 1996, there were 158 registered cases. However, the cases are concentrated in the central Pacific coast, Huetar Atlántica, and Huetar Norte regions, all three of which have prevalence rates of over 1.2 per 10,000; 78% of the cases are multibacillary; the ratio of men to women is 2; and cases in children under 15 are unusual. In 1996, disability, primarily of the hands, was detected in 35% of the diagnosed cases.

**Rabies and Other Zoonoses.** No cases of human rabies have been registered for almost 30 years. The last case of canine rabies was reported in 1987. Epidemiological surveillance activities, vaccination of dogs, and joint activities along the northern border are being carried out. There are no efficient reporting and surveillance systems for other zoonoses.

**AIDS and Other STDs.** The first known cases of AIDS in Costa Rica, in the first half of the 1980s, occurred in hemophiliacs. In 1985, cases began to be recorded in homosexuals, and in the 1990s heterosexual and vertical transmission have emerged, with a growing trend in recent years. Parenteral transmission was never significant (0.6% of the cases are in intravenous drug users and another 0.6% were people exposed through blood transfusions). In recent years, 100% of transfusions have been screened for HIV.

In 1990, 94 AIDS cases were diagnosed, jumping to 207 in 1995. According to preliminary data from 1996, 202 cases of AIDS were registered, with an incidence rate of 5.3 per 100,000; 90.5% of the cases were in men. For men, the group most widely affected was homosexuals (37.4%), followed by heterosexuals (20.6%) and bisexuals (19.6%). From the onset of the epidemic through 1996, 1,156 AIDS cases and 621 deaths were registered in Costa Rica. The average survival period once the infection has been diagnosed is from 18 to 24 months.

There has been a gradual reduction in the reporting of cases of other STDs, particularly gonorrhea, whose incidence plummeted from 433.8 per 100,000 population in 1982 to 123.7 in 1990 and 68.6 in 1995. The incidence of syphilis also decreased from 99.8 per 100,000 in 1983 to 54.3 in 1990 and 44.7 in 1995. The persistence of congenital syphilis is noteworthy. In recent years, some 90 to 150 cases have been registered annually.

#### *Noncommunicable Diseases and Other Health-Related Problems*

**Nutritional Diseases and Diseases of Metabolism.** The 1996 National Nutrition Survey showed the following distribution in boys and girls aged 1 to 6, according to the Waterlow classification: 92% normal; 2% acute malnutrition; 5.7% chronic malnutrition; and 0.3% acute and chronic malnutrition.

The body mass index was used to assess the preschool population, yielding the following results: 16.4% had a nutritional deficit and 14.9% were overweight. Excess weight occurred in 16.3% of the girls and in 13.6% of the boys. Differences in nutritional deficiencies according to sex were not observed.

The proportion of infants with low birthweight was 6.3% in 1990, 7% in 1994, and 6.1% in 1995.

Despite prevention programs, 1,292 cases of endemic goiter were reported in 1994; 91% were in women, 63% of whom were of childbearing age.

Diabetes mellitus is the ninth leading specific cause of death; in 1994, it was responsible for 258 deaths. It is the eighth leading reason for medical consultations in men and fourth in women. In hospital discharges, it appears as the fourth leading cause of hospitalization; in 1995 it was cited in 4,421 discharges, mostly women.

**Cardiovascular Diseases.** Cardiovascular disease is the leading cause of death in Costa Rica, with a mortality rate of 12.5 per 10,000 population in 1994. Total deaths from cardiovascular disease increased between 1992 and 1994 at an annual rate of 4.4%. In 1994, they represented 31% of all deaths

in the country. Together with neoplasms, they are responsible for half of all deaths; add injuries and diseases of the respiratory system and they account for three of four deaths in Costa Rica. It is estimated that 15% of the Costa Rican population over the age of 15 is hypertensive. In the 1992 survey of causes of medical consultations, hypertension ranked second in both men and women.

Among cardiovascular diseases, the leading cause of death is ischemic heart disease, followed by cerebrovascular disease and then diseases of pulmonary circulation and other forms of heart disease.

In 1994, ischemic heart disease was the third leading cause of hospitalization in men between 45 and 59. In the population 60 and over, it ranked second in men and fourth in women.

Deaths from cardiovascular disease usually occur at relatively advanced ages; therefore they rank fourth as a cause of YPLL. Cardiovascular diseases produce half as many YPLL as unintentional injuries or accidents, which rank first as a cause of YPLL.

**Malignant Tumors.** Malignant neoplasms are the second leading cause of death. In the period 1992–1994, they were responsible for 8.1 deaths per 10,000 population annually and were the third leading cause of YPLL. The most frequent forms are neoplasms of the stomach, lung, prostate, breast, cervix, and uterus. In general, mortality from malignant neoplasms remained stable in the period 1985–1995, except for prostate cancer in men, which increased, and stomach cancer in women, which decreased.

In general, the incidence of cancer in the period 1985–1994 remained stable, although in women there was a downward trend in cancer of the stomach, lung, cervix, and hematopoietic and reticuloendothelial systems and an upward trend in breast cancer. In men, the incidence of lung and prostate cancer increased and that of the stomach and the hematopoietic and reticuloendothelial systems decreased.

Neoplasms were the sixth leading cause of hospitalization in the period 1988–1995. Lymphomas, leukemias, and cancers of the stomach and reproductive system are the most frequent cause associated with hospital discharges of men. In women, the most frequent types of cancer as a cause of hospitalization are those of the reproductive system, particularly cervical cancer.

**External Causes.** Unintentional lesions or accidents (injuries and poisonings) ranked third as a cause of death. In 1994, they produced 12.2% of deaths and 21.8% of YPLL and were the leading cause of loss of healthy life (measured by the combined morbidity and mortality indicator). The corresponding mortality rate was 48.9 per 100,000.

In 1994, mortality from traffic accidents reached a rate of 17.5 per 100,000. The average age of those deaths was 39

years; deaths from motor vehicle accidents involving pedestrians were the most common (44%), followed by collisions between vehicles. Injuries from motor vehicle accidents involving pedestrians were responsible for 47.1% of deaths from external causes. In 1995, the highest mortality (9.2 per 10,000) from these causes was registered in the province of Limón, where external causes were the second leading cause of death.

In 1994, homicide and intentionally inflicted injuries were responsible for 183 deaths, at an average age of 34, and 3% of YPLL; 54% of these deaths were caused by firearms and 38% were stabbings.

In 1994, there were 162 suicides, at an average age of 37, and 2.5% of YPLL. The most frequent instruments of suicide were poisoning (37%), hanging (30%), and guns (30%).

**Domestic Violence.** The health sector does not have a registry for health problems stemming from domestic violence. Partial data, obtained from government institutions that assist the victims of violence, are presented here.

In 1994, the Office of Women's Affairs, a judicial arm of the Ministry of the Interior, reported treating 2,299 women who were victims of violence. In 1995, the number of complaints rose to 5,597; by May 1996, 4,221 complaints had already been registered. This increase may be related to the establishment of a National Plan against Family Violence in 1995 and the promulgation of a law punishing assaults on women. According to this same source, in 1995 and through May 1996, 715 complaints were handled from young people between 15 and 20 who were victims of domestic violence.

In the first quarter of 1997, the National Children's Foundation (*El Patronato Nacional de la Infancia*), a government agency specializing in the protection of children, reported treating 24,044 children and adolescents. The leading reasons for treatment were family and conjugal conflicts (5,423 cases), abandonment (5,639 cases), child support (1,727 cases), administrative institutionalization (2,566 cases), and abuse (3,332 cases; 1,209 were physical abuse, 2,021 sexual abuse, and 102 psychological abuse).

The National Geriatrics Hospital is the only center that has begun recording domestic violence against the elderly. In 1995–1996, 92 cases of abandonment were handled, 87 of which involved women. In 1997, a protocol for detecting domestic violence was implemented, and an increase in the detection and treatment of cases was reported.

Within health sector reform, the treatment of domestic violence has been introduced as part of the modified care model.

**Oral Health.** In the last national study in 1992, there was a DMFT (decayed, missing, and filled teeth) Index of 4.9 in the 12-year-old population. The lowest and highest values were

found in Limón, with a DMFT of 4.0, and in Puntarenas, with a DMFT of 6.0.

**Natural Disasters and Industrial Accidents.** Between 1992 and 1996, the geological instability of the country, climatic phenomena, and damage to the ecological balance caused by the urban-rural distribution and economic development have led to floods, landslides, earthquakes, volcanic eruptions, and other disasters. In that period, the 1992 earthquake in Pejibaye and the August 1993 tropical storm Bret were declared national emergencies. In 1995, there were 32 floods resulting from hurricanes or other storms. In 1996, the flooding in Limón and in the south left a death toll of nine. That same year, as a result of hurricane Cesar, there were floods in the central and southern Pacific coast that affected 451,496 people, leaving 4,560 persons in shelters and 39 dead. In October 1996, the floods caused by hurricanes Lili and Marco caused seven deaths in Guanacaste and the northern area of the country.

## RESPONSE OF THE HEALTH SYSTEM

### National Health Plans and Policies

The national health policy and the strategic plan of the health sector for the period 1994–1998 incorporate the social policies of the national development plan. That plan states that the State will play a central role in order to ensure favorable conditions for improving health and delivering services, based on the following criteria: solidarity of financing; equitable access; universal coverage; high levels of quality, opportunity, and flexibility; efficient use of resources; and compassionate treatment of patients.

Health sector reform includes the following areas:

1. Leadership in health. Using a multisectoral approach, the Ministry of Health has assumed a leadership role in the national health system that goes beyond the sector. It has four strategic functions: management and leadership in health; regulating the development of health; monitoring health; and scientific research and technological development.

2. Adaptation of the model of care. This means adjusting care at the primary level in order to handle local health problems appropriately and in a timely manner, promoting community participation, and trimming public spending. The model uses health teams that provide basic services, subdivided into five comprehensive care programs for children, adolescents, women, adults, and the elderly.

3. Adaptation of the system of financing. This includes (a) redesign of the financing model; (b) standardization of the contribution system; (c) efficiency in collections; (d)

development of a system to improve resource allocation and administration; (e) joint private participation options in health management, financing, and services; (f) development of a system of costs, statistics, and evaluations; and (g) sale of services. The intent of this adaptation is to meet the objectives of efficiency and sustainable financing by promoting equity in the distribution of social burdens and benefits, encouraging people to subscribe to the social security system, reducing tax evasion, and streamlining the use of resources by establishing modern and efficient controls.

### Organization of the Health Sector

#### *Institutional Organization*

According to a decree promulgated in 1983, the health sector consists of the Ministry of Health, the Ministry of National Planning and Economic Policy, the Ministry of the Presidency, the Costa Rican Institute of Water and Sewerage Systems, the CCSS, and the University of Costa Rica. In 1989, the decree on the General Regulations of the National Health System was proclaimed, expanding the sector to include participation by municipalities, private services, communities, and other universities.

The agreements defining sectoral reform include the 1993 Loan Agreement and Health Sector Reform Project with the World Bank and the 1994 law on the loan contract between the Government of Costa Rica and the IDB to finance the steering role of the Ministry of Health, improve the physical infrastructure of health centers and health posts, and build the Alajuela hospital.

The Ministry of Health is playing a leadership role within the framework of sectoral reform, with strategic management, leadership, and regulatory functions; the CCSS is responsible for service delivery. Financing for maternity and health insurance is tripartite, with contributions based on wages from employers (9.25%), the State (0.25%), and workers (5.5%). In the case of voluntary beneficiaries, workers contribute 13.25% and the State contributes 0.25%. The poor are covered by the State. A small sector of the population uses private health services, whose supply has increased in recent years. There are no data on the demand for and coverage of private services. The CCSS must cover 100% of the population. Currently 90% of the population is insured; the rest is covered by the State.

The decentralization process is being implemented through a financial resource allocation model for the three levels of care, based on separation of the financing and service delivery functions, through contracts between the central level and the hospitals and health areas. Furthermore, admin-

istrative deconcentration implies the creation of health areas with decentralized functions for managing human resources, procurement, and the budget.

Private participation in the national health system is regulated by the General Health Act and the General Health Regulations, which define private services as an additional component of the system. Regulating health facilities has begun as a pilot project, with an accreditation process for public and private maternity hospitals, adhering to the minimum standards set by the Ministry of Health.

Certification and practice in the health professions are regulated by the respective professional associations, each of which is established by law, and to which the State delegates the functions of certification and monitoring of professional practice. There is currently a public debate on the constitutionality of this situation, with proposals that this function be reconsidered by the Ministry of Health as the representative of the State.

Sanitary controls for and registration of drugs, food, and hazardous toxic substances are the responsibility of the Department of Drugs and Narcotics Controls and Registries of the Ministry of Health. Health regulation and surveillance, which includes the monitoring of air and soil quality, housing, chemical safety, and hazardous waste, are the responsibility of the Environmental Sanitation Division of the Ministry of Health. These are basic aspects of a priority public health program known as the Program to Protect and Improve the Human Environment. The surveillance system is being organized, and the formulation of national standards on water quality and regulations governing effluents and the recycling of wastewater have already been completed. Food is included in this program. However, the development of a System of Sanitary Controls and Registries that would include food protection is being discussed. There are currently no health controls or registries for biomedical equipment and materials.

## Health Services and Resources

### *Organization of Services for Care of the Population*

**Health Promotion.** Since 1995, the Ministry of Health has had a National Program for Health Promotion and Protection in place that promotes social participation and links together its education and mass communication components. The influence of this program became evident in situations such as the cholera threat and the dengue epidemic, as well as in the implementation of participatory intersectoral projects, such as the ecological and healthy cantons program, the health worker education centers, and the program for community health educators.

**Vaccination Programs.** In 1995, the ongoing vaccination program had national coverage of over 84% for all vaccines, although there is great disparity among cantons. In 1993, coverage in the most backward cantons was improved as a result of the vaccination campaigns. In 1997, coverage with the three-dose oral polio vaccine was over 80% in 67 of 81 existing cantons; coverage with the diphtheria, tetanus, and whooping cough (DTP) vaccine was under 88% in 72 cantons; and coverage with the measles vaccine in 1-year-olds exceeded 88% in 72 cantons. At present, all newborns in CCSS medical units receive the BCG and hepatitis B vaccines, which represents 99% coverage at the national level.

**Epidemiological Surveillance.** In 1996, there was little epidemiological surveillance for a number of reportable diseases and for pesticide poisoning. Entomological surveillance is conducted to combat malaria and dengue, and monitoring of water quality is the responsibility of the special basic sanitation program.

Investigating and detecting suspected cases of disease or circumstances subject to epidemiological surveillance are carried out at the local level, and notification using a standardized form is the responsibility of the local levels of the Ministry of Health, the CCSS, hospitals, and laboratories. The information flows vertically within each institution up to the central level of the Ministry. There is little coordination at the local and regional levels of the two institutions, and there is insufficient capacity for data analysis at those levels. However, there is a growing operations research capability and response capacity to the problems identified—for example, rapid response to epidemic outbreaks. The data are consolidated periodically at the national level and are published in the *Weekly Epidemiological Bulletin*.

The capacity for diagnosing dengue, cholera, leptospirosis, meningococcal meningitis, measles, and rubella is ensured by the national reference laboratory. A research center (ICMRT) linked to the University of Louisiana, in the United States, which offers diagnostic services to the CCSS, has the capacity to diagnose hepatitis and cytomegalovirus. Diagnosis of malaria is concentrated in the laboratory at the central level, although in 1996 it began to be decentralized to some local services in priority areas. The AIDS Control Department has a diagnostic and reference laboratory for public and private laboratories that diagnose HIV and for blood banks. There is diagnostic capacity for *Escherichia coli* and rotavirus in the National Children's Hospital.

Deaths in children under 1 began to be monitored in 1996 and maternal mortality was monitored in 1997. There are standards and instruments for investigating every death in each establishment. Surveillance of pesticide poisoning was implemented experimentally in some areas in 1995, and in 1997 it began to be extended to the entire country.

**Water Supply, Sewerage Systems, and Solid Waste Disposal.** By law, the Costa Rican Institute of Water and Sewerage Systems (AyA) is responsible for designing and building water and sewerage systems. It also manages the systems in the major cities, which are home to half the country's population. The Basic Sanitation Unit of the Ministry of Health provides assistance to the rural population in the digging of shallow wells and building latrines. Municipalities have the primary responsibility for water and sanitation, and many of them manage their systems without the AyA. There are also several hundred administrative committees for rural water supply systems, which are formed and trained by the AyA.

The AyA administers 141 water supply systems, which cover approximately 63% of the population. In addition, there are 2,214 water supply systems operated by 150 municipalities, 1,664 community committees, and 400 private businesses. The quality of the water in these systems is unknown and is neither controlled nor monitored by the Ministry of Health.

With respect to wastewater, it is estimated that the effluents from only 3% of the population are treated before being discharged. The Tárcoles river receives raw sewerage from the metropolitan area in addition to virtually untreated wastewater, most of which is from tanneries and from the food, coffee, and textile industries.

The Ministry of Health has sought to substantially increase water and sanitation coverage in the country. In order to reduce the deficit to virtually zero, the Basic Environmental Sanitation Project was implemented in 1993 and was financed with national resources from the Joint Institute for Social Assistance and the Social Development and Family Allowances Fund, channeled through PAHO.

The municipalities are legally responsible for solving the problem of domestic solid waste. The Executive Unit for Solid Waste of the Ministry of the Environment and Energy collaborates with the municipalities in this area. Some private firms also provide urban services for refuse collection and elimination in controlled sanitary landfills. Solid waste from hospitals is the responsibility of the CCSS and, for the time being, is sent to landfills or municipal dumps.

With regard to solid waste collection, coverage reaches 62% of the population. Roughly 62 municipalities (70%) deposit their solid waste in dumps, 55 of which are in the open air throughout the country. According to the National Waste Management Plan, approximately 11,764 tons of waste are generated daily in Costa Rica, 86% of which is agroindustrial waste, 13.6% is ordinary waste, and 0.4% is hazardous waste (household, industrial, pesticide, fertilizer, and hospital waste). Hospital waste is almost always sent to municipal dumps, burned in the open air, thrown away, or sold.

**Prevention and Control of Air Pollution.** The Ministry of Health is responsible for monitoring and controlling air pollution in general, and the Ministry of the Environment is responsible for environmental protection. There are no air quality standards. The current standards for regulating the emission of contaminants were prepared to support an environmental management program in the metropolitan area.

The main measures adopted by the Ministry of Health to reduce the emission of air pollutants include the installation of emission control equipment in the main industries, sampling conducted by specialized laboratories, direct sampling from chimneys, and the corresponding analyses. The Environmental Control Department verifies the efficiency of contaminant removal and requests improvements and controls when necessary. Furthermore, the Ministry of Public Works and Transportation, through the Transit Police, conducts a program for controlling motor vehicle pollution, for which it has equipment for direct measurement of emissions from vehicle exhaust pipes. In 1994, regulations on vehicle emissions were promulgated.

The year 1996 marked the eighth anniversary of a 1988 executive decree and was the deadline for the Refinadora Costarricense de Petróleo (Costa Rican Petroleum Refinery) to produce only unleaded gasoline, which is currently the only type produced.

The "Ecomarchamo" program, whose purpose is to reduce vehicle emissions, is under the jurisdiction of the Ministry of the Environment and Energy, the Ministry of Public Works, and the Transit Police. The Environmental Sanitation Bureau, a unit of the Ministry of Health, operates a network to monitor air quality in the San José metropolitan area. The work of the National University in laboratory studies and testing has been very important and has been conducted with the technical and financial support of ProEco, a nongovernmental organization financed with Swiss funds.

Several years ago, a decree was issued prohibiting smoking in public places. Furthermore, the CCSS and the Ministry of Health are conducting educational programs and advertising campaigns in this regard. In order to improve air quality in closed spaces, there are regulations governing ventilation in buildings. The occupational safety and health regulations and the regulations governing enclosed spaces also include guidelines on ventilation to prevent health problems. There are also regulations on the use and control of asbestos and products that contain asbestos, which are aimed at reducing harmful pollution from construction activities.

**Food Safety.** There is no defined policy on food safety or plan of action to coordinate the institutional food protection programs. By law, the responsibility for the coordination, orientation, execution, supervision, and evaluation of the programs lies with the Ministry of Health. Other participants

are the Ministry of Agriculture and Livestock, through the Plant Health, Meat Inspection, and Animal Quarantine Departments, and the Ministry of Economics, Industry, and Commerce, through the National Office on Standards and Units of Measure, which regulates metrology, labeling, and quality control. All these institutions have well-equipped laboratories.

The country has technical policy instruments for food regulation, and the Ministry of Health is a member of the Joint FAO/WHO *Codex Alimentarius* Commission. Costa Rica has also signed the World Trade Organization agreements on health. The University of Costa Rica and the Costa Rican Institute for Research and Teaching in Nutrition and Health have conducted several studies of fresh livestock products, particularly with regard to pesticides, hormones, and heavy metals.

Through an agreement between the National Institute of Learning and the Ministry of Health, continuing education courses with national coverage were established for food-handlers. Basic education programs also include basic aspects of food-handling. Food vending on the street is not a major health problem, although it is on the rise.

The Program for Supplementary Feeding in educational centers has broad coverage, especially in rural and marginal urban schools.

#### *Organization and Operation of Personal Health Care Services*

The CCSS consists of a central level responsible for institutional policies, a regional level made up of seven regional medical service offices, and a local level comprising health areas and sectors. At the tertiary level, the CCSS has three national general hospitals and six national specialized hospitals. At the secondary level, there are 7 regional hospitals, 13 peripheral hospitals, and 38 type 3 and 4 clinics (with three or four basic medical specialties). The primary level is made up of 103 clinics, to which the sectors with basic teams for comprehensive health services and health areas are being added, as well as health centers and health posts transferred by the Ministry of Health. Each level of care covers a given territory, and the facilities make up a clearly defined service network with levels of care based on the degree of complexity and response capacity. The system for transfer and return of patients among peripheral, regional, and national hospitals has been defined. Outpatient clinics offer a service to transport patients to national or regional hospitals when warranted by the patient's condition or the distance between establishments.

The strategy for strengthening the primary care level has the goal of forming 800 health sectors with basic comprehensive care teams. In July 1996, 306 sectors were already in operation, covering 1.13 million inhabitants. This infrastructure is

located mainly in priority areas, because of their lesser socioeconomic development. The Ministry of Health still operates some health centers and health posts, mobile medical and dental units, dental school clinics, comprehensive health care centers, school lunchrooms, and comprehensive child health and nutrition centers. The majority of these services are being integrated or will soon be integrated into the CCSS.

Preventive oral health services traditionally have been provided by the Ministry of Health to schoolchildren and pregnant women, whereas the CCSS offers more complex services to direct insurance subscribers and less complex procedures to their dependents. In recent years, dentistry programs have been established in three private universities, and private practice has proliferated in this area, offering more complex services than the public sector.

Psychiatric care in the country is provided in all the national and regional hospitals and type IV clinics, as well as in some peripheral hospitals. The main psychiatric center is the National Psychiatric Hospital, with 800 beds, 600 of which are for chronically ill patients. Another hospital geared exclusively to the chronically ill has 300 beds. Attempts currently are being made to decentralize care and favor keeping the user closer to his/her community and family. A process of openness and deinstitutionalization has also begun. Drug addiction is treated on an outpatient basis by the Institute on Alcoholism and Drug Dependence. There are three schools of psychology, two of which are private; a state school of social work; and a graduate specialization in psychiatry at the national university.

Since 1994, adolescents have actively participated in the planning and execution of activities and projects targeted to this age group.

Reproductive health services, which were traditionally the responsibility of the Ministry of Health, were transferred to the CCSS to be provided by the basic care teams. The Costa Rican Demographic Association, a nongovernmental organization with external financing, supports CCSS services with family planning offices and activities to detect cervical and breast cancer.

The CCSS has a comprehensive care program for the elderly and a geriatric hospital. For the academic training of specialists there is a graduate program in gerontology and geriatrics and a master's program in gerontology at a state university.

The Official Drug List is an integral part of the National Drug Formulary. In the CCSS, drugs are selected on the basis of demographic criteria, morbidity and mortality statistics, special program requirements, and available infrastructure and equipment. Their effectiveness and safety, as determined in clinical trials, are also taken into account as well as their price at the time the purchases are made. In 1997, the CCSS allocated 7.55% of its budget for drugs, for a total of US\$

49.49 million. In addition to procurement at the central level, the medical units, which are usually hospitals, are authorized to make cash purchases. Per capita spending on drugs in the CCSS was US\$ 14.46 in 1989 and US\$ 16.15 in 1997. In the latter year, the country had 161 pharmacies.

Hospital medical equipment is very centralized in the three national hospitals, which have over one-third of the total; the 13 peripheral hospitals have only one-fifth. One in 10 pieces of equipment in the country is not in good condition, and over 6% of equipment is underutilized. In general, surgical and emergency units are considered to be well equipped and well structured. However, space is sometimes lacking in intensive care units. Furthermore, the procurement and use of equipment is not coordinated.

### *Human Resources*

There are no clear policies or coordinated human resources programs for health. In 1995, for every 10,000 Costa Ricans there were 12.7 physicians, 3.8 dentists, 9.6 nurses, 3.6 pharmacists, 20 nursing auxiliaries, 0.3 sanitation engineers, 2.5 community assistants, and 0.6 nutritionists. Education for the health professions is provided in several public and private teaching, university, and para-university centers. In 1989, the university established a master's degree in public health, which has trained primarily staff members of the Ministry of Health and the CCSS.

Sector institutions have assumed the responsibility for continuing education and training, and the Center for Strategic Development and Information on Health and Social Security plays a very important role in human resources education for health services. Since 1995, it has held courses for regional and local personnel in basic concepts of epidemiology, local health management, and computer science. Since 1989, the education of health services managers and administrators has been emphasized.

The Costa Rican Institute for Research and Education in Nutrition and Health, which basically conducts clinical research, and the School of Public Health of the University of

Costa Rica, where research on education is carried out, are the institutions that conduct the bulk of health research.

### *Expenditures and Sectoral Financing*

Total public expenditure on health in 1996 was US\$ 889.28 million. In that same year, public expenditure in health as a percentage of GDP was 9.8%, 0.7% of which corresponded to the Ministry of Health, 8.0% to the CCSS, 0.5% to the Costa Rican Institute of Water and Sewerage Systems, 0.4% to the National Insurance Institute, and 0.2% to the municipalities. Public expenditure in health in 1996 was distributed in the following manner: 81.9% for the CCSS, 6.4% for the Ministry of Health, 5.3% for the National Institute of Water and Sewerage Systems, 4.2% for the National Insurance Institute, and 2.1% for the municipalities.

In Costa Rica, the public sector has been the predominant sector in financing and delivering health services, which is a trend that has remained stable. Up-to-date information on private sector participation is not available. The latest available data are from a 1987 household survey, in which it was estimated that private health expenditure totaled US\$ 77.2 million, equivalent to 23% of the spending of the Ministry of Health and the CCSS.

### *External Technical and Financial Cooperation*

The CCSS has a modernization and hospital infrastructure development program financed by the World Bank. Cooperation projects are also under way with the IDB for institutional strengthening of the Ministry of Health, development of the steering role of the sector, and upgrading of the health services infrastructure for primary care. With other agencies of the United Nations, such as the UNDP, UNICEF, UNFPA, and PAHO, there are broad cooperation programs for healthy communities, service delivery, the steering role, the quality of care and disease prevention, and the control of environmental degradation.