INTRODUCTION

Costa Rica is located in Central America and has a land area of 51,100 km$^2$. It is divided into 7 provinces, 81 cantons, and 473 districts. The estimated population in 2010 was 4,563,500 inhabitants (51% male): 64% of them lived in urban areas and 36% in rural areas. Figure 1 shows Costa Rica’s population structure. Two percent of the population identifies as indigenous or Afro-Costa Rican.

Fertility is low, with an overall rate of 1.8 children per woman.

Costa Rica is a country of democratic traditions, and it holds presidential elections every four years. Its health sector comprises the following public entities: the Ministry of Health, the Costa Rican Social Security Fund (CCSS), the National Insurance Institute (INS), the Costa Rican Water and Sewer Institute (AyA), the Institute on Alcoholism and Drug Dependency (IAFA), and the Costa Rican...
In 2009, contributory health insurance coverage reached 87.6% of the total population, encompassing 61.9% of the economically active population (EAP) with health insurance and 53.6% of those with pension insurance. Between 2007 and 2010, the nonsalaried EAP covered by health insurance increased from 39.1% to 57.4%, and that covered by pension insurance, from 21.7% to 37.7%.

The gross domestic product (GDP) grew 2.6% in 2008, far below the 7.8% recorded in 2007. Public social investment began to accelerate in the second semester of 2006, and there was a cumulative growth of nearly 22% over the 2007–2010 period (2). Per capita income also rose dramatically, from US$ 5,118 in 2006 to US$ 6,521 in 2008. Costa Rica thus became a middle-income country, making it ineligible for international cooperation assistance.

The population increased 50.7% between 1990 and 2010. In 1990, the population structure displayed a pyramidal shape in which the age groups younger than 15 years represented more than one-third of the total. By 2010, the slope had shifted toward older ages, with a progressive decrease in younger ages. This reflects a decrease in fertility and low mortality in the intervening years.


Major health achievements up through 2010 have included a low infant mortality rate (9.46 per 1,000 live births), low maternal mortality (2.11 per 10,000 live births), and high life expectancy at birth (79.3 years overall [81.8 years in women and 76.9 in men]). These achievements have been made possible by efforts to improve Costa Rica’s key social determinants of health. One that stands out is the low overall illiteracy rate, 4.8% (5% among men and 4.5% among women). The rate is 2.7% in urban areas, and it is 7.9% in rural areas. During the 1990–2009 period, the country maintained a net school enrollment rate close to 100% (6). As of 2009, 99.4% of the population had access to water suitable for human consumption, thus already meeting another MDG target for 2015 (6).
HEALTH DETERMINANTS AND INEQUALITIES

In 2008, Costa Rica began to see signs of adverse social effects caused by the major economic crisis that erupted that year. The impacts worsened in 2009, with increased unemployment, slowing national production, and decreased government tax revenues.

In 2007, 173 districts located in the central region of the country (the greater San José metropolitan area) comprised the more-developed section of Costa Rica. These 173 districts cover only 5.4% of the country’s land area but have 53.9% of the total population. Conversely, of the remaining, 296 districts, which are less developed, many are located in the zones bordering on Nicaragua or Panama.

The income of Costa Ricans declined between 2006 and 2010. In 2008, the average household income fell 0.3% as compared to the previous year, and the income of the employed population increased only 2.2%, much less than the 9.3% rise of 2007 (2). Over the preceding decade, the percentage increase in income among the poorest families was greater (between 4.6% and 7.7%) than it was among the wealthiest. However, in absolute terms, the increase was still small, given the lower purchasing power of the poorest segment of the population. In 2008, one out of every three workers—a population of over 500,000—was paid less than the minimum wage. Most of these persons were youths and older adults without a secondary education, working in the private sector or on their own (2).

The overall employment rate in 2009 was 52.1%, with a higher level among males. However, the share of women in the job market rose from 30.3% in 1990 to 41.7% in 2008 but fell to 38% in 2009. For men, the net participation rate was 72.5% in 2008 and 66.8% in 2009 (2, 6).

In the field of technology, Costa Rica is still behind the average for Latin America. The National Program for Educational Information Technology is still deficient, particularly in schools serving low-income children and youths and those living in remote areas. This is an important challenge to reducing social gaps in the country.

There is also a growing gap between the urgent needs of the population living in slums and the ability of the country’s legal and institutional framework to offer timely solutions. Funds aimed at slum eradication represent only 5.5% of the total available resources for housing. Even so, in 2007, the number of makeshift dwellings was reduced, and overall access to basic services for homes was improved.

THE ENVIRONMENT AND HUMAN SECURITY

Access to Clean Water and Sanitation

In the 2006–2010 period, the proportion of the population with access to drinking water increased from 81.2% to 89.5%. In 2010, the country had 2,318 water supply systems that served 98.7% of the total population (7). Water supply is the responsibility of the AyA (180 systems), the municipal governments (236), the Public Utilities Company of Heredia (12), and community/rural committees (1,890). The supply draws from 4,580 sources: 965 wells, 3,292 springs, 46 treatment plants, and 277 surface water sources.

Sewage and Wastewater Disposal

The country has invested in sewage systems and centralized wastewater systems for the major cities. However, septic tanks are still the most common sewage treatment solution, with coverage increasing from 67.3% in 2006 to 72.3% in 2010 (7).

Solid Waste

In recent years, the country has worked toward overcoming problems with solid waste collection,
treatment, and disposal services. In 2007, a manual for the development of municipal plans for comprehensive solid waste management (PMGIRS) was published as a tool for participatory municipal planning. At present, 12% of municipalities have such a plan in place, 9% are working on preparing one, and 79% have yet to address this issue (8). In 2008, the national Solid Waste Plan (PRESOL) was established as a framework to guide government and private work toward adequate, comprehensive management of solid waste throughout the country.

**AIR POLLUTION**

Adequate records and information are lacking, and no studies have been performed that show a relationship between air pollution and health in the country. However, monitoring of the concentration of some air pollutants in the city of San José has been carried out\(^1\) since 2004. Those observations indicate that half of the city’s population is exposed to particulate matter concentrations (PM\(_{10}\)) ranging from 27 to 51 µg/m\(^3\).

**PESTICIDES**

Costa Rica imports 12 million kg of pesticide active ingredients every year. According to data from the nation’s State Phytosanitary Service, 25% of the 2,944 pesticides registered in the country are used on rice and banana crops. Although the majority of these products are classified into low-risk categories, highly or extremely toxic substances are also imported. Within the framework of the Montreal Protocol, Costa Rica has managed to reduce its use of methyl bromide by 60%. Unfortunately, the remaining 40% will be the most difficult to eliminate, as that portion corresponds to “critical use” products, that is, ones used in agricultural areas with severe pest problems.

**ROAD SAFETY**

Mortality from traffic accidents declined from 14.7 deaths per 100,000 population in 2006 to 12.15 deaths per 100,000 in 2010. The vast majority of fatalities—85%—are among males, and the leading cause of accidents (28.7%) is speeding.

**VIOLENCE**

Homicide mortality rose from 6.8 deaths per 100,000 population in 2006 to 9.33 in 2010, with a greater incidence among young adult men. Of the 11,028 cases of family violence reported by the health services in 2008, 80% of the victims were women, with a rate of 402 cases per 100,000 population. According to records kept by the court system, the rate of reported domestic violence was 114.45 cases per 100,000 population in 2004, but declined to 102.33 in 2007. The number of women murdered by a partner or former partner went from 16 in 2007 to 38 in 2008.

**DISASTERS**

According to data from the National Commission on Emergencies (CNE) on incidents, emergencies, and disasters to which it responds, 80% of these events are hydrometeorological in nature. They are especially related to the rains associated with tropical cyclones and low-pressure systems in the Caribbean Sea, influence from the Intertropical Convergence Zone, cold fronts, easterly waves, and recurrent periods of the El Niño/La Niña-Southern Oscillation (ENSO) phenomenon of warming or cooling of ocean temperatures, both in the cool phase and in the warm phase. The effects of seismic and volcanic phenomena are at a secondary level of importance. According to research conducted by the National Seismologic Network (RSN), there are

\(^1\) Carried out by the Environmental Analysis Laboratory of the National University of Costa Rica, in cooperation with the Ministry of Health, the Municipality of San José, and the Ministry of Environmental Affairs, Energy, and Telecommunications.
more than 150 potentially active faults that could generate earthquakes in the next decades or centuries.²

**CLIMATE CHANGE**

Between 2007 and 2010, more than 14 major natural events were recorded, 12 of which were in some way related to climate change. The most relevant such events included the state of emergency declared in May 2008 due to the prolonged dry season in the northern area of the country and the effects of Hurricane Alma in the South and Central Pacific regions. In August 2008, Hurricane Hanna affected 70% of Costa Rica’s territory, and, in November 2010, Hurricane Thomas affected the entire Pacific Coast and Central Valley of the country.

**FOOD AND NUTRITIONAL SECURITY**

In 2005–2007, the dietary energy supply (DES) was 2,810 kcal/person/day, and the national average minimum dietary energy requirement (MDER) was calculated as 2,410 kcal/person/day. Grains, roots, and tubers account for the single largest share of the available DES (33.1%), followed by milled rice (16.6%) and refined sugar. These percentages indicate that Costa Rica has a stable food supply that could satisfy the average MDER. However, that is not enough to deal with the issue of undernutrition, since the population living in extreme poverty had a food deficit of 150 kcal/person/day for the 2005–2007 period. The problem is limited access to staple foods (9). The country has had its National Policy and Plan for Food and Nutritional Security in place since 2011.

² These faults include Atirro and Navarro in Turrialba canton, Guápiles in the Caribbean, and Alajuela and Escazú in the Central Valley geographic region.

**HEALTH CONDITIONS AND TRENDS**

**Health Problems of Specific Population Groups**

**Maternal and Reproductive Health**

From 2006 to 2010, 102 maternal deaths were recorded in Costa Rica; 15 of these deaths occurred in 2010, for a maternal mortality rate of 2.11 per 10,000 live births. Limón, Puntarenas, and Guanacaste were the provinces with the highest maternal mortality rates for the 2006–2010 period. The leading causes of maternal mortality were unclassified obstetric disorders, complications occurring mainly in the course of labor and delivery, and complications of the puerperium. Coverage for prenatal care before the 13th week of pregnancy rose from 69% in 2008 to 77% in 2009, whereas care of children under the age of 1 year declined from 85.4% in 2007 to 82.8% in 2009.

With regard to sexual and reproductive health, the most widely used family-planning methods are female sterilization, oral contraceptives, and injectable contraceptives. The use of intrauterine devices, the rhythm method, and the male condom has declined. According to the 2008 National Youth Survey, one out of three adolescents aged 15–17 years reported having had sexual intercourse, whereas 6 out of 10 young people between the ages of 18 and 24 said they had had their first sexual relations in adolescence.

**Children (0–5 years old)**

The infant mortality rate during the 2006–2010 period remained at an average of 9.4 per 1,000 births per year; in 2010, the rate was 9.46. Puntarenas, Limón, and Guanacaste had infant mortality rates higher than the national average, whereas Cartago had the lowest rate in the country. The main causes of infant mortality were disorders originating in the perinatal period and congenital malformations. Mortality in children under 5 years old remained stable throughout the 2006–2010 period, at 2.3 per 10,000 population.
Adolescents (12–19 years old)

In Costa Rica as of 2007, adolescents (50.5% male and 49.5% female) made up 17% of the total population (10). The specific fertility rate for females 12 to 19 years old is 2.02 per 1,000 births. Alcohol consumption and tobacco smoking begins early for some adolescents, including for 28.3% of those between the ages of 12 and 13. With regard to mental health, according to IAFA studies, 9% of the adolescent females evaluated have severe depression and 9% have moderate depression, whereas 5% of adolescent males are affected by moderate depression and 4% by severe depression.

Adults (20–59 years old)

In the population aged 20 to 59 years (56% of the general population), overall mortality during the 2006–2010 period remained constant at 32.6%. The leading causes of death are diseases of the circulatory system, tumors, and external causes; mortality is higher among men than among women.

The Elderly (60 years old and older)

The proportion of older adults has grown to 6% to 7% of the population, with men making up 52.28% of this group. In terms of overall mortality by age group, those over the age of 75 account for 44.29% of all deaths. During the 2005–2010 period, mortality in the 65 and over group remained constant at 38.7 per 1,000. The leading causes of death in 2010 were diseases of the circulatory system, tumors, and diseases of the respiratory system.

Workers

Since 2003, Costa Rica has had an occupational health plan. In 2010, the five leading causes of disability due to occupational exposure were diseases of the musculoskeletal system (12.7%), injury and poisoning (10.9%), mental and behavioral disorders (9.5%), diseases of the respiratory system (5.8%), and infectious and parasitic diseases (5%), which account for 40% of total days of disability. These causes stand in contrast to those observed during the 2000–2004 period, when the main sources of days of disability were upper respiratory infections, back pain, and infectious diseases.

The Disabled

In 2011, a national registry of statistics on disability was created. According to a report from 2010, men 31 to 65 had a higher prevalence of disability. A motor disability was the most common (30.50%), followed by a cognitive disability (28.86%) and a social/emotional disability (11.04%).

Mortality

The total mortality rate trended upward during the 2006–2010 period, rising from 3.7 to 4.1 per 1,000 population—driven by the over-75 age group (42.33% of deaths). The leading causes of death were: 1) diseases of the circulatory system, 2) tumors, 3) external causes, 4) diseases of the respiratory system, 5) diseases of the digestive system, 6) diseases of the endocrine system, and 7) communicable diseases.

Morbidity

Communicable Diseases

Vector-borne Diseases

In the 2006–2010 period, 84,443 cases of dengue were reported, of which 471 were serious. During that period, 2010 had the highest incidence of the disease, with 976.4 cases per 100,000 population. Three regions of the country had 71.3% of all the cases: Central Pacific (15,737), Chorotega (7,373), and Atlantic Huetar (5,069). Serotypes D1, D2, and D3 are currently in circulation, which increases the risk of severe dengue. The case-fatality rate remained in the 0% to 2.5% range between 2006 and 2010, at least partly thanks to early care. Costa Rica has been implementing the Integrated Management Strategy for dengue since 2005.
The high-risk area for malaria encompasses approximately 70% of the national territory and is home to a population of roughly 1.6 million. The most important vector involved in the transmission of malaria in the country is *Anopheles albimanus*. Between 2006 and 2010, a dramatic (96%) reduction in the number of cases of malaria was recorded, from 2,903 to 114 cases over the course of this five-year period. Now, nearly all cases occur in the Atlantic Huetar region. Malaria eradication is a Millennium Development Goal that has already been achieved, with a >10% reduction in cases and zero mortality.

**Vaccine-preventable Diseases**

The official immunization schedule includes vaccines against tuberculosis, hepatitis B, rotavirus, diphtheria, tetanus, whooping cough, *Haemophilus influenzae* type b, poliomyelitis, pneumococcal infection (with 13-valent and 23-valent vaccines), influenza, measles, mumps, rubella, and chickenpox. During the 2006–2010 period, no cases of any vaccine-preventable diseases in the process of elimination were recorded in the country. Over the same period, immunization coverage (using DPT, OPV, HBV, Hib, and BCG coverage as a proxy) remained in the 81% to 93% range.

**Zoonoses**

Leptospirosis had the highest morbidity of any zoonotic disease in the 2006–2010 period, with 2,150 total cases and 46 deaths. The overall case-fatality rate was 2.1% (ranging between 1.0% and 7.2%). Mortality is predominantly in males, with a 10:1 male-to-female ratio. No cases of canine rabies have occurred in the country since 1987. Between 2006 and 2010, seven deaths due to cysticercosis were reported, although it is not a notifiable disease.

**Neglected Diseases and Other Infections Related to Poverty**

The number of new and repeat cases of leprosy notified in Costa Rica between 2006 and 2009 decreased from 16 to 7. Of the total number of cases, 34 (69.4%) were in men. Throughout this period, the prevalence of leprosy remained below the international standard of 1 case per 10,000 population. With respect to bancroftian filariasis, epidemiological and antigen studies conducted between 1974 and 2011 have indicated that lymphatic filariasis has been eliminated in Costa Rica (city of Limón). This means the country fulfills the WHO requirements elimination and qualifies to start a verification process.

**HIV/AIDS and Other Sexually-transmitted Infections**

In the 2002–2010 period, 2,278 cases of HIV were recorded. The incidence over that period was 52.6 cases per 100,000 population, but with a downward trend starting in 2008. The incidence of new cases of HIV depends strongly on men, who make up 74.1% of the infected population. The male-to-female ratio for the period was 3:1. The age group most affected were persons 20 to 49 years old, who accounted for 77.9% of cases. The four provinces where the vast majority (72%) of the cases have been concentrated are San José, Heredia, Puntarenas, and Cartago. The number of AIDS cases during the 2002–2010 period was 1,805. AIDS incidence rose from 3.6 per 100,000 population to 4.3 per 100,000 between 2006 and 2008, but returned to 3.6 in 2009. In 2009, the provinces with the highest incidence of AIDS (77.9% of the nationwide total) were San José, Heredia, Cartago, and Guanacaste.

Between 2006 and 2008, the incidence of syphilis rose from 29.2 to 32.3 per 100,000 population, and then declined to 19.3 in 2009. Incidence in the 20-to-24-year age group was between 65% and 73% above the national average. The reported incidence of congenital syphilis ranged from 1.2 to 1.5 cases per 1,000 births. Costa Rica has intensified efforts for early detection, timely intervention, and monitoring of pregnant women with HIV infection and syphilis, as well as children with congenital syphilis, so as to eliminate vertical transmission of HIV and syphilis by the year 2015.

**Tuberculosis**

Tuberculosis in Costa Rica was stable over the 2006–2010 period, with an incidence of 11.4 cases per
100,000 population in 2008. Men are most affected, with a male-to-female ratio of 1.6. Mortality rates remained low and relatively stable, with, on average, one TB death per 100,000 population between 2006 and 2010. The most affected provinces as of 2009 were Alajuela and San José (40.9% of all cases in the country). The cantons with the highest incidence rates were Limón, Guácimo, Matina, Dota, Corredores, Cañas, Santa Cruz, Garabito, Osa, La Cruz, Golfito, San Carlos, and Carrillo (35.4% of all cases in the country).

**Emerging Diseases**

During the year 2010, 1,630 suspected cases of influenza A(H1N1) were reported, with transmission occurring throughout the country. The frequency of cases began to decline from week 29 of 2009 onward. However, starting in week 43 of 2009, the incidence of diseases caused by other respiratory viruses, mainly respiratory syncytial virus and adenovirus, began to increase. The cumulative incidence in the country was 75.5 cases per 100,000 population. It was highest among those younger than 30 years and lowest in people aged 60 or older. Except in the under-15 age group, infection was slightly more frequent among women than in men. Of all the patients hospitalized with severe acute respiratory infection, 12.52% had A(H1N1). The most frequent risk factors for influenza A(H1N1) infection were asthma, diabetes mellitus, obesity, chronic obstructive pulmonary disease, heart disease, smoking, and pregnancy. In 2010, nine deaths were caused by influenza A(H1N1), with an average progression of 3.8 days from the onset of symptoms to presentation, and an average age at disease onset of 35.1 years.

**Chronic, Noncommunicable Diseases**

According to surveys on chronic disease and cardiovascular risk factors carried out in 2004 and 2010, the prevalence of diabetes increased 2.9% in the 2006–2010 period. The change was especially noticeable in women, whose prevalence increased by 50%. The age group most affected were persons 40 to 64. Their prevalence changed markedly, rising from 11% to 16.2%. Hypertension also showed a 6% increase in prevalence in 2010 as compared to the previous survey.

**Cardiovascular Diseases**

Between 2006 and 2010, diseases of the circulatory system, the leading cause of death in the Costa Rican population, accounted for 25,592 deaths—an average rate of 99.5 per 100,000 population. In 2010, there were 5,422 deaths reported, for an adjusted mortality rate of 97.33 per 100,000 population, with a slight downward trend over the last eight years (11). The leading overall cause of mortality in 2010 was ischemic heart disease, followed by cerebrovascular diseases and then hypertension.

**Malignant Neoplasms**

Malignant neoplasms, the second leading cause of death after diseases of the circulatory system, accounted for the most potential years of life lost (PYLL) between 2006 and 2009: 87.8 and 91.3 per 10,000 population, respectively. In men, the leading cause of cancer-related death in 2009 was prostate cancer, with an adjusted rate of 17.61 per 100,000 men, followed by stomach cancer (16.62), lung cancer (8.15), colon cancer (5.71), liver cancer (4.83), and leukemias (4.32). Prostate and skin cancers showed a rising trend over the 2006–2010 period, while the frequency of stomach cancer decreased and that of other malignant neoplasms showed very little change.

In 2009, the malignant neoplasm with the highest mortality rate in women was breast cancer, with an adjusted rate of 12.20 per 100,000 women, followed by stomach cancer (8.68), colon cancer (5.87), cervical cancer (5.78), leukemias (3.80), and lung cancer (3.35). The frequency of cervical and stomach cancer has trended downward, while that of colon and breast cancer has increased slightly.

**Nutritional Diseases**

**Malnutrition**

The 2008–2009 National Nutrition Survey (ENN) (9) found that among the population aged 1 to 4
years, 23.8% were at risk of malnutrition and 5.6% were malnourished, with no differences between males and females. Only 50% of infants received exclusive breastfeeding during the first 3 months of life, and less than 10% were exclusively breastfed until the 6th month of life. On the other hand, mixed breastfeeding (including formula) increased significantly from the 2nd month of life onward, reaching 60% of infants by the 6th month of life.

**Micronutrient Deficiencies**

The 2008–2009 ENN also indicated that 25.4% of the preschool population has depleted iron (ferritin) reserves and 23.9% has a zinc deficiency. Vitamin A deficiency affected 30.1% of preschoolers and 22.6% of schoolchildren. In the preschool population, the prevalence of anemia was almost twice as high in urban areas as compared to rural areas. As for the adult population, 35% were found to have selenium deficiency. The prevalence of anemia was 9.6% in women of childbearing age, 11.1% in the Costa Rican population overall, 13.2% in older women, and 15.8% in older men. In rural areas, the anemia prevalence was even higher in both older women (16.1%) and older men (21.4%).

**Obesity**

The 2008–2009 ENN also found that the prevalence rate for either overweight or obesity exceeded 20% in schoolchildren and adolescents. This rate reached 60% in the 20–44 age group and 20% among older adults, without much variation at the national level.

**Mental Disorders**

In 2010, of a total of 158,476 outpatient psychiatry visits, 41% were first visits. Of the total of 329,349 hospital discharges, 1.7% were due to mental disorders (50.6% of which were among patients between the ages of 20 and 44 years). Mood disorders, neuroses, personality disorders, and schizophrenia were the most prevalent mental illnesses. Mortality from suicide (which was more frequent in those 15 to 49 years old) decreased from 7.2 per 100,000 population in 2006 to 5.8 in 2010. Of a total of 5,613 hospital beds, 16.76% were dedicated to psychiatry services, 58.16% of which were located in two specialized centers. During the 2006–2010 period, mental health was a priority in the National Development Plan.

**Other Health Problems**

**Oral Health**

According to the 2008–2009 ENN, the prevalence of caries in preschool children—as measured with the DMF (decayed, missing, filled) index—was 43.7%. The DMF index for caries severity was 2.2, and the prevalence of caries was higher in rural areas.

**Risk and Protection Factors**

**Smoking**

The prevalence of smoking—in terms of the proportion of persons who have smoked at some time in life—decreased from 31.5% to 28.6% over the 2006–2009 period. Another interesting element is the stability found during this period in the incidence rate of smoking, which remained at 6.4%, according to the national survey on drug consumption among secondary education students conducted in 2009. Comparisons of the average ages at onset of smoking found very little change between 2006 (12.38 years in women, 12.88 years in men) and 2009 (12.9 years in women and 12.5 years in men). In 2003, Costa Rica ratified the Framework Convention on Tobacco Control.

**Alcoholism**

The prevalence of alcohol consumption among young persons increased from 38.1% in 2006 to
53.5% in 2009. The annual incidence of alcohol consumption in young people was stable: 17.7 per 1,000 students in 2006, and 18.7 in 2009. The average age at onset of alcohol consumption in 2009 was 12.79 years (12.6 and 12.9 years for men and women, respectively), while in 2006, it had been 12.93 years (12.85 and 13.01 years for men and women, respectively), showing stable rates during this period.

Illegal Drugs

According to research conducted by the IAFA in 2006, the main illegal drugs being used in the country were—in descending order of popularity—marijuana, crack, cocaine, and heroin. The highest prevalence of lifetime illegal drug use was found in the provinces of San José and Limón (9.16 and 8.97 per 1,000 population, respectively). The average age at onset of marijuana use was 17.6 years in men and 18 years in women, whereas at the national level, the age at onset of cocaine and crack use was approximately 18 years for men and women alike.

Physical Activity

Also according to that 2006 IAFA research, the proportion of people who engaged in some physical exercise three or more times a week to improve their health or personal appearance was 33.3% in 2006 (versus 30.2% in 2001), and with more men engaging in exercise than women (42.2% and 32.7%, respectively).

HEALTH POLICIES, THE HEALTH SYSTEM, AND SOCIAL PROTECTION

The Health System’s Stewardship Role

A new process of redefinition and institutional reorganization of the Costa Rican Ministry of Health was carried out between 2006 and 2011. The health sector is defined as the group of centralized and decentralized public institutions that have an explicit and legally defined mandate to provide health services to the population. The objective of the strategic health policy of Costa Rica is “to advance from disease management toward health promotion, positioning health as a social value and directing and leading the interventions of social actors toward surveillance and control of the determinants of health, in an evidence-based and equitable manner.”

The Health System’s Performance

The Costa Rican Social Security Fund (CCSS) is the only public entity that provides health services to the various groups of the Costa Rican population. The CCSS has been organized functionally by level of care, and geographically into seven planning regions. Primary care is the responsibility of Basic Comprehensive Health Care Teams (EBAIS), located across the 103 health areas of the country. The secondary level provides specialty care services, inpatient care, and surgical treatment in basic specialties. This level encompasses 10 large clinics, 13 peripheral hospitals, and 7 regional hospitals; these facilities also provide oral health and microbiology services. The tertiary level provides specialized care in three national general hospitals (Calderón Guardia Hospital, San Juan de Dios Hospital, and México Hospital) and five national hospitals specializing in gerontology, women’s health, pediatrics, psychiatry, and rehabilitation (13).

The social security system in Costa Rica has three components: 1) health services (known as health insurance), which are the responsibility of the National Insurance Institute (INS), and of the CCSS; 2) economic benefits, which cover pensions and subsidies; and 3) social services, which help families faced with critical socioeconomic issues, by supplying cash transfers and services (14).

Costa Rica has a universal and collective medical social security system, the coverage of which expanded from 87.6% to 91.9% of the population over the course of the 2006–2010 period. However, some 369,000 people are still uninsured. The core challenge for the health system in the coming years is the financial sustainability of the CCSS. For health
services users, the major difficulties are the long wait times to obtain appointments for care at health facilities and the limited availability of those slots.

**Health Legislation**

During the 2006–2010 period, a set of laws and standards meant to regulate public and private services of interest to health and to protect the health of the population were fostered. Two of the most important were the Comprehensive Waste Management Act (Law No. 8839) and the National Vaccination Law (Law No. 8111), which created the National Vaccination and Epidemiology Commission. In 2007, the country ratified the International Health Regulations through executive decree No. 34038-S. In 2009, the National Liaison Center, an entity under the Ministry of Health that receives national and international alerts, was established.

**Health Expenditures and Financing**

Between 2006 and 2010, total health expenditures as a percentage of GDP increased from 7.81% to 10.9%. Government spending on health as a percentage of total health outlays declined from 69.0% to 68.0%, whereas private expenditures increased from 31.08% to 32.59%. Per capita health expenditures increased from US$ 410 to US$ 668.49, whereas the government’s overhead cost per capita increased from US$ 283 to US$ 450. In 2010, 86% of the government’s overall health expenditures came from CCSS funds (15).

**The Health Services**

According to the current Costa Rican health model, all primary care and emergency care is guaranteed, whereas secondary and tertiary care requires enrollment in some form of insurance. Throughout the country’s 103 health areas, 991 EBAIS health care teams are in operation, 40 of which serve the indigenous population. The total population covered by the EBAIS teams is 4,471,407. In addition, 66% of health centers are also concentrated in these regions. Since 2008, a major effort has been made to improve access to health care among people living with chronic diseases, by means of a networked program for hospitalization and home care of chronic patients.

The Advisory Committee on Drug Quality is in charge of reviewing and proposing standards in the field of drug quality as well as monitoring implementation of the Central American Technical Regulation on Pharmaceutical Products. Since 1982, the CCSS has kept an Official List of Drugs in line with the National Drug Formulary (16).

**Intersectoral Action and Health**

Under the leadership of the Ministry of Health, intersectoral plans and actions have been fostered and carried out in several areas. These have included, for example, in the education sector, through the Avancemos (Let’s Move Forward) program of conditional cash transfers; in environmental matters, to implement the Comprehensive Solid Waste Management policy; and with the private sector, for the prevention and control of influenza A(H1N1) through hygiene and protection measures (11).

**Knowledge, Technology, Information, and Human Resource Management**

**Scientific Production in Health**

Between 2006 and 2009, total public sector spending on research and development activities increased from US$ 97.2 million to US$ 159 million, which represented 0.53% of the GDP. Academia’s investment in this field accounted for 48% of the total, and that of the government sector, for 25%. Out of 3,854 research and development activities recorded in 2009, 18% were in the medical sciences and 657 were related to the protection and improvement of human health (17).
Management of Health Information

The Ministry of Health has developed a project to expand the information network that connects its headquarters with the health regions. The CCSS is moving toward linking the CCSS headquarters, hospitals, and health areas, in order to enable long-distance consultations and teleconferences; the implementation of electronic health records is also planned. The possibility of communicating via Internet with end users of the health system is still limited (18).

Technology and Health

All CCSS facilities have basic equipment available at all levels of care. The CCSS network includes specialized hospitals with high-technology equipment, including CT scanners, transplant units, dialysis units, and intensive care units (ICUs). Seven regional hospitals have ICUs. The CCSS has engineering and maintenance personnel who are in charge of strengthening technological management in each facility.

Human Resources

The Workforce

As of 2010, of the various professionals employed by the Ministry of Health, 67% served in the social sciences, economics, and engineering, while 33% worked in the health sciences and veterinary medicine. The CCSS has a staff of 49,374 workers—57% women and 43% men—distributed across 350 types of positions: administrative (9,326), nursing, and support services (20,784), medical sciences (10,688), and general services (8,576). In the AyA, of a total of 3,054 employees, 23% have professional qualifications, 62% are technical personnel, and 15% are operational personnel. The ratio of physicians per 10,000 population fell from 20.8 in 2005 to 17.2 in 2007, whereas the corresponding ratio of nurses rose from 16 to 17.2. In urban areas, there are two more physicians and three more nurses per 10,000 population than in rural areas (19).

Personnel Training

The reforms of the 1990s and the consequent deregulation of health personnel training have given rise to the creation of additional health education institutions. Six new medical schools have been established (for a total now of eight such institutions), and so have six new nursing schools (for a total of seven). The opening of a sizable number of private universities has also generated a diversity of educational offerings in the health field.

Continuing Education

The CCSS has a Center for Strategic Development and Information in Health and Social Security (CENDEISSS), which organizes and develops training plans with an emphasis on primary care through local continuing education committees (known by the Spanish-language acronym CLEP) and regional continuing education committees (CREP). Furthermore, virtual education has been implemented, with the cooperation of several participating institutions of the Virtual Public Health Campus Node, enabling easier access to information, resources, and knowledge for human resources in the health services.

The Labor Market for Health Professionals and Careers in Health

Civil service laws and regulations apply to all public employees, and salary adjustments or raises are agreed upon through negotiations and agreements between the authorities and professional associations. In recent years, there has been a dynamic of conflict between the trade unions in various health sectors and CCSS officials concerning improvements in wages and working conditions.

Migration and Other Challenges in Human Resources

Because the wages of health personnel in the Costa Rican public sector are highly competitive at the regional level, the migration of these professionals is
almost nonexistent. And, given the similarity in wages between the CCSS and the Ministry of Health, movement of employees between these two institutions is also extremely rare.

**HEALTH AND INTERNATIONAL COOPERATION**

According to data from the Ministry of National Planning and Economic Policy (MIDEPLAN), over the 2006–2009 period, Costa Rica received a total of US$ 520.2 million in assistance, of which 73.4% (US$ 382 million) corresponded to bilateral cooperation programs and 26.6% (US$ 138.2 million) to multilateral cooperation. Of the total assistance, 15.5% was in the area of health and social development (20).

**SYNTHESIS AND PROSPECTS**

In recent years, Costa Rica has undoubtedly continued to show clear signs of needing changes and adjustments to the reforms proposed in the 1990s. The objective should be to maintain a universal social security system and strengthen stewardship of the social production of health, based on the requirements of a globalized world and on the tenets, values, and principles of Costa Rican society.

The CCSS, the institutional health service provider, covers almost 92% of the Costa Rican population. It is currently coping with various issues and with the challenge of regaining short-term financial liquidity. This entails searching for consensus and agreements to introduce measures that can help bridge the medical coverage gap, expand access to health services, improve the quality of care, rethink the “model of care,” and adjust the funding and management of health services on the basis of improved institutional management processes.

The Ministry of Health has made major efforts to conceptualize its steering role. However, there is still a need to develop and implement strategies designed to strengthen that role and increase its effectiveness. This includes the need for hiring and retaining staff with the required competencies, as well as strengthening intersectoral coordination mechanisms that enable development of leadership and governance in an increasingly complex international and national scenario.

In 2010, Costa Rica presented its second country report on achieving the Millennium Development Goals. That document reported major progress, but challenges remain, such as inequalities in maternal and child mortality indicators in cantons with human development indices below the extreme poverty line. Due to its favorable health and education indicators, Costa Rica is not a magnet for potential donors. This means that the country’s political and social institutions must face the challenge of designing innovative strategies that promote a mobilization of enough funds to surmount pending social debts, sustain the achievements already made, and respond to new commitments.

**REFERENCES**


